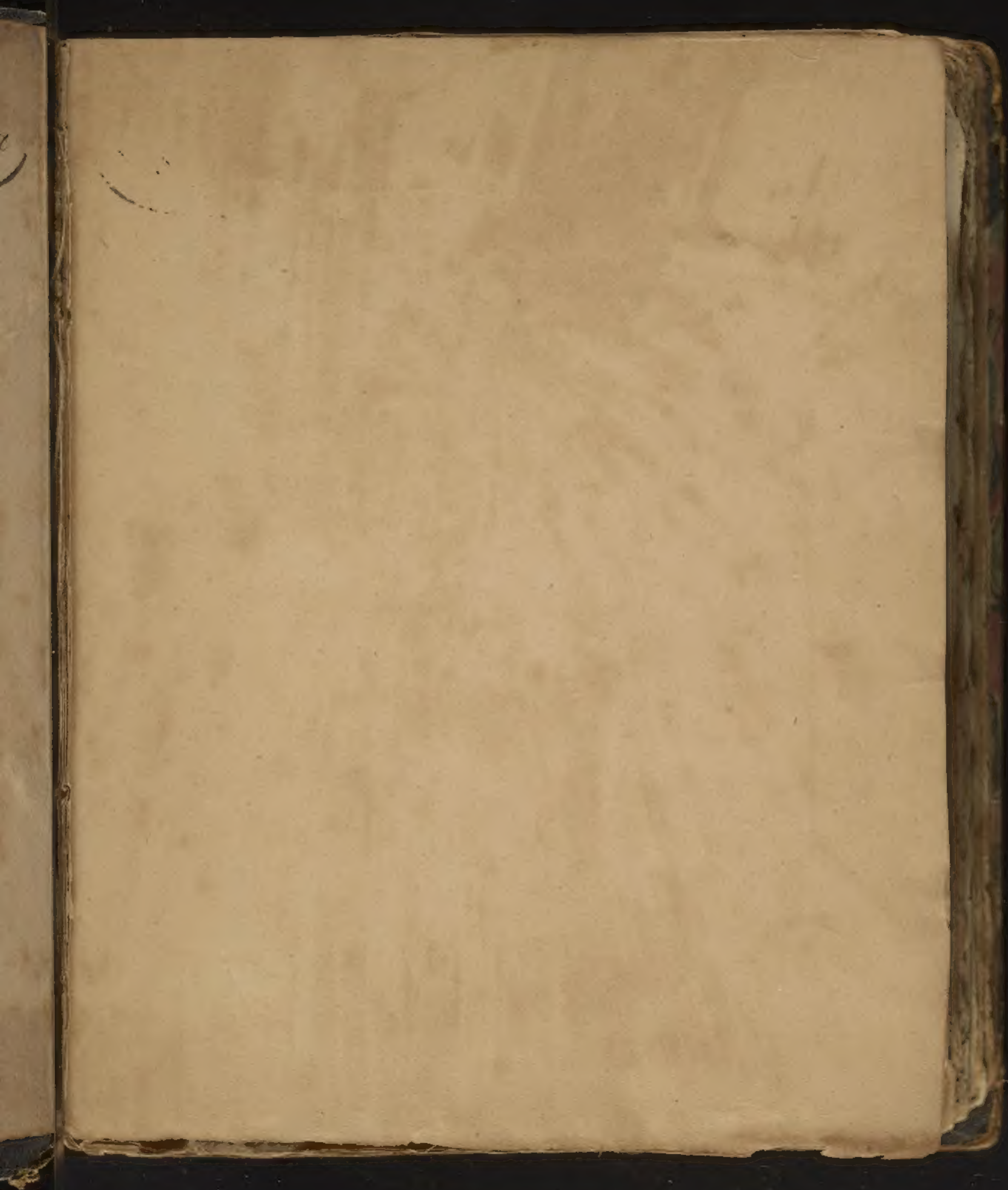
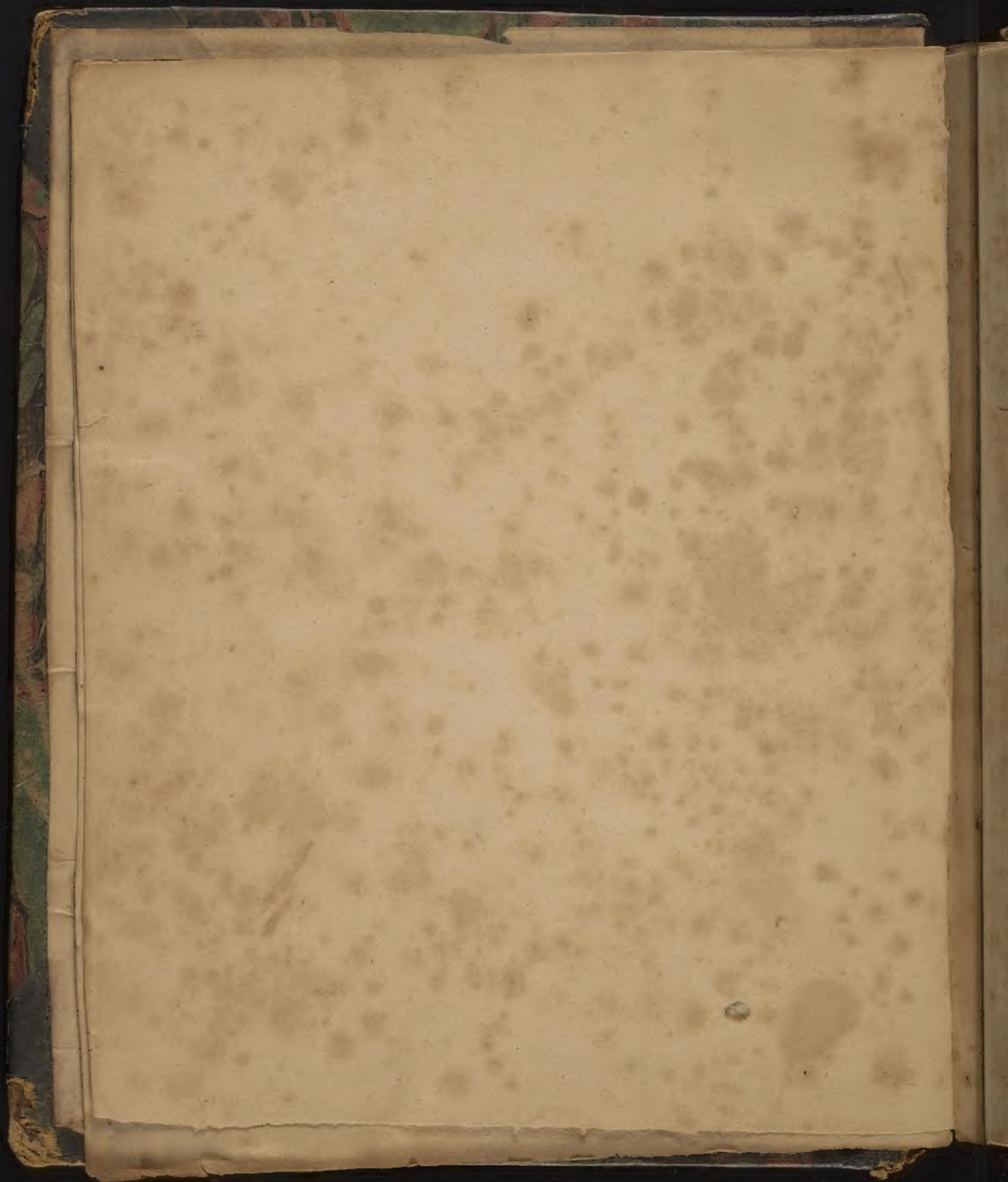


2.

J. Chambers^{sr}
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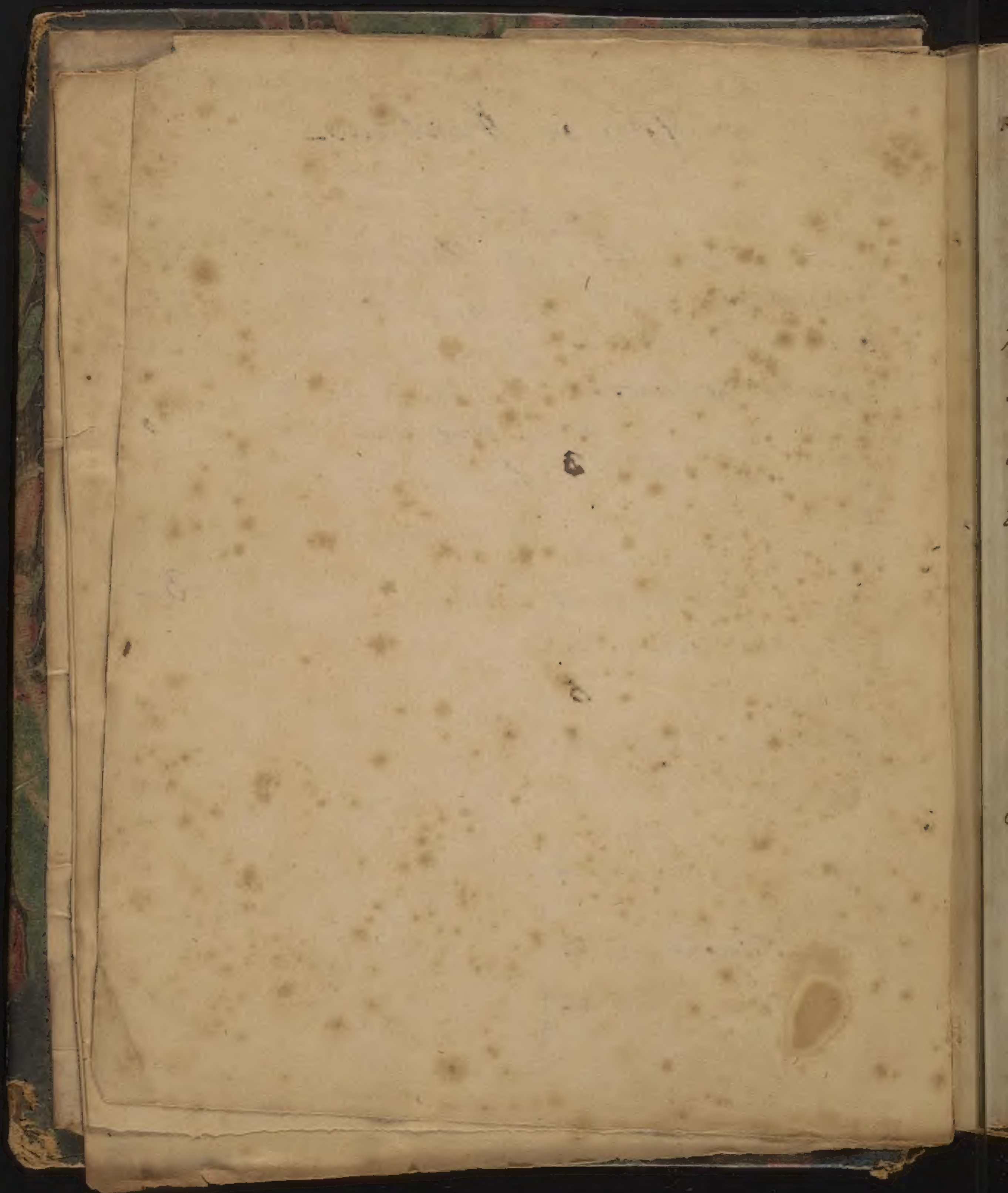




Notes on Aukhams

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(1)

Notes On Huxham

He cautions the young practitioner
against being deceived by the oppressed
pulse in ~~the~~ fevers is often the consequence
of too great a fulness of blood. If he is
doubtful in the case let him apply his finger
to the pulse in the other arm, while the Patient
is bleeding, and if he find it flag
considerably, flutter, or intermit, it
is time to desist: if it beats stronger and
more open he may proceed with safety
and success. —

He opposes the Practice of Bleeding in
the beginning of all Ardent and Inflam?
fevers. And recommends Clysters or Lentene
Purges such only as act on the intestines

2
3

Canal, as Manna, Glauber's Salt &c. -
little more seems necessary in the cure
of acute fevers, than proper and well
timed Evacuations, and plentiful cooling
dilution, with a few violent Medicines.
Diluting Drinks to be taken but not too
much at a time - tepid Baths - -

Of Intermittent fevers.

Proximate Cause of Agues is a moist
foggy Atmosphere exhaling from a
swampy, or cold soil, -

He mentions the influenza's prevailing
in the Spring of 1743 and that it frequently
became pleuritic, or pleipneumonia: and
as frequently after 2 or 3 Days turn into -
Quintana or tertiana, is he ascribes to the
difference of the constitutions of Patients. -

Quotidian and double tertians / is by the bye
are often the same thing / will not bear the
Bark in the beginning; till the fever draught
Vt. purging and vomiting have been
made use of.

Quotidian Catarrhus comes nearest
an inflammatory State. - and if the
fever from a tertian, turns into a semi-
tertian, or Quotidian, or greatly anticipates
the Time of the regular Paroxysm - the
intermittent, or Continual fever is forthwith
the Consequence. And this is too often
effected by a very hot Regimen, or a
too hasty use of the Bark -

In truth I never give the Bark pre-
=ticularly in Venereal Agues, till after 4 or 5

Paroxysms at least, and after having
drawn more or less Blood from Persons
much inclined to the sthenic. —

Nothing is more effectual in curing Agues
than well timed Vomits. — (as Nature shows
us, by making this one of her constant
Efforts in the Paroxysm) to previous bleeding
makes them much more safe, in full
Sanguine Habits, especially when given
in the Paroxysm, is frequently prac-
tised with great Success. — He sometimes
gave Nitre with the Bark. — ~~and~~ But
Agues in affect Persons of a lax Habit and
poor thin Blood require a warm, in-
=vigorating alterative Regimen. As Cortex
Peruv: frequently proves ineffectual
unless assisted with proper Alexepharmics
as R. Scrp. & Virg. — Contrayerv. Myrrh. Camphor &c.

(2)
If an Intermittent turns into an inflammatory
Continual Fever, Bleeding and a gentle Cool
Purge will soon reduce it to its Type.

Never be too hastily in giving Bark or
Chalybeates when the Patient has a yellow
cast of the Countenance a tense Abdomen
and a very costive habit of Body. —

In all Cases Mercurial, Saponaceous,
Pecorants or Rhubarb, Aloetics, Regentals
or Soluble Tartar — must be preceded
or joined with the Bark. —

He ^{concludes} ~~concludes~~ from previous Reasoning
that a Typhoid Section is a medium
between an Inflammatory and
slow nervous Fever

~~every kind of fever~~ and that on the
one Hand, the Constitution of the Solids and

fluids may be highly wrought up as to
fire the Blood into a continual inflammation,
and that on the other, it may be so far
depressed as to bring on the low Influenza
or slow nervous Fever. Hence the Cause
and Cure of such Fevers seem to be
obvious.

He states that every Kind of Fever is a
struggle of Nature to relieve herself from
something Oppressive, we should always
favour her Endeavors by the most
proper means that Reason and
Experience can suggest. — but we
should be very cautious in the beginning
Especially, how we proceed in suppressing
or in bridling her Efforts, till we have
well considered the Nature, Quantity

and Quality of the Juice and the Con-
stitution of the Patient - In order to this
it will be highly necessary to make
a diligent Examination into 2 Things
1 The State of the Solids,
2^{dly} That of the Fluids -

Of the State of the Solids.

The Cold Bath / he considers of infinite
Advantage to Persons of lax Fibres and
weak. but not so much to Persons
of a close Fibre. - Indeed (he says) in
the times of Popery and Ignorance
when the Priests were Knaves, and the
People Fools, Many a Well was foun-
-dified for nothing but pure Cold Water.

He concludes that the fibrous system in
Persons of a dense Habit may become
overbraced by the Cold Bath. by it
means too much of the finer Lymph
and even of the Liquidum Nervosum
^{maybe} forced off by the Pores.

In the Eruption even of Small Pox, he thinks
it would be unpardonable not to bleed
before the Eruption in Persons of a strong
athletic Habit - and says it would be
great failings to bleed a person of a
loose Habit - He is governed very much
by the Constitution of his Patient in the
treatment of this ^{or any other} Disorder. Thus he says.

Hard firm flesh, dry skin, great heat,
Thirst, and Colic, hot Breath and violent
pains, with a strong, tense, quick Pulse,

are putty, evident Symptoms of Stomach
very elastic Fibres, and of an ardent
and inflammatory fever...

A weak, quick, soft pulse, no great
Heat, or Colour, little thirst, pale
tongue, a soft Flesh and Skin, clammy
sweat, irregular, cold or profuse
Sweat, with Heaviness and Anxiety,
rather than from Jaws, and a more
tho perhaps a white Coated, or furred
Tongue denote the contrary.

Of the State of the Pleura.

Heat in an ardent Fever will turn the
Blood into a Jelly as is formed by exposure
Since when Blood is drawn off in higher
inflammation. Thus it appears covered over

with a thick glutinous coat, or stuff as
it is called. - I have seen it in, says
in some severe pleuritic and Rheumatic
Disorders near an Ictick thick. -

That it is formed by the febrile Heat is
Manifest; for at the first Bleeding at
the very Beginning of the fever, it shall
often appear pretty fluid, tho' very dense
whereas on the second, third, or fourth
Bleeding when the Heat hath had a
longer Continuance and been increased
to a greater degree it becomes excreting
very -

* Acid and inflammatory Fevers are naturally
the Effect of over elastic and rigid Fibres, and
a very dense and viscid blood; as the low
and slow nervous kind are of a too lax
state of Vessels, and a weak and thin blood.

Of the Dissolved and putrid
State of the Blood.

"When Women have large irregular Spots like
Bruises they are always subject to a vast
Overflow of the catamenia,

Blood drawn in such Cases remains in
an uniform half coagulated Mass a mere
Gore as it were, not separating into Crassamentum
and Serum generally of a livid or darker
Colour than usual, the sometimes it continues
long very fluid. — In these Cases Drawing
of small Quantities of Blood is proper, to
abate the too great Impetus on the tender Vessels
even tho' there may be no apparent Plethora. —

For a thin acalid state of the Fluids
and bleeding of the Gums, Sponginess &c
he recommends Bark and Elixir of
Itch.

The Use of Alkaline Medicines. as Sp. C. C.
have a tendency to, produce this State
of the Blood. The Alkaline Medicines
that have usually been made use of
for this end - produce the thin dissolved
State of the Blood. - as Vol. Alk. will
keep the Blood from coagulating out of
the Body. - The Bite of a Viper and other
Venomous animal bring on a very sudden
Corruption and Deposition of the Blood. -

"It is always a fatal Prognostic, when Spots
and Hemorrhages appear at the very eruption
of the small pox and the sick seldom or
never survive the 9th Day. of the Disease;
the Blood running into Deposition &c.
I am persuaded scarce one in a thousand
recovers under these dreadful circumstances.
Especially if the Spots are very red, black
and numerous. - The only Remedy is Calomel
and Acid is certainly often have very good effects

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infectious fever attended with Haemorrhages.
Dr. Reid recommended them, & showed in
the putrefaction and Bleeding from all
parts and also the Method of curing them.

In Remittent Affections of the Colon of the
Buffy instead of being of a whitish yellow as
usual the Color resembles a Cornelian
Stone or a little more delicate than that of
the Common Gall of red Currants - This
Color of the Buffy on blood I constantly observe
to be an ill omen. - as also when the blood
is of a dark kind Color covered with a lead
Coloured or greenish thin film. -

He mentions a Malignant Pulmonic Fever
in which Bleeding appeared to sink the Patient
immediately. - even when attended with hard swell
great load at the Breast. - pungent pain of the Side
and severity of the Cough he had warranted him in
advising it. -

He mentions a case of a disease which was
lived with fainting, from debility in which
lived spots had appeared on several parts
of Body with Hemorrhage from Gums
&c - Having been cured by Bleed
an 2. etc having previously been
twice bled.

Of the Difference between a Nervous
Nervous, and a putrid Malignant fever.

Huxham supposes that in putrid malignant
fevers the Blood peculiarly is called is
affected. Whereas the flow nervous fevers
seem to have their seat chiefly in the lymphatics
and nervous juices.

Of the Flow Nervous Fever.

The patient at first grows somewhat restless,
and feels slight Chills and shudders, with
intermittent sudden flushes of Heat and a kind
of weariness all over, like what is felt after great Fatigue

This is always attended with a sort of heaviness
and distension of spirit and more or less of
a load or pain or coldness in the head
a nausea and dereliction of every thing
soon follows, without any considerable
throb, but frequently with urging to vomit.
The little but misused Phlegm is brought up.

This a kind of lucid Interval of several
Hours sometimes intervenes, yet the symptoms
return with aggravation, especially towards
night: The Head grows more heavy, or
giddy, the Heat greater, the Pulse quicker
but weak, with an oppressive kind of
sweating. A Great Torpor, or obtuse
Pain and coldness affects the mind a part
of the Head frequently - and sometimes a
heavy pain is felt on the Top all along
the Coronary suture - This, and that is

the back part of the Head, generally attended
nervous Fevers, and are commonly succeeded
by some degree of a Delirium. — In this
Condition the Patient often continues for five
or six Days, with a heavy pale sunk
Countenance, seeming not very sick and
yet far from being well. Restless, anxious
and commonly quite void of Sleep, tho
sometimes very drowsy and heavy — but
altho he appears to throb about him
actually to sleep he is utterly insensible
to it and denies that he doth so.

The Pulse, during all this time, is quick weak
and unequal, sometimes fluttering, and
sometimes for a few minutes slow, very
intermitting; and then with a sudden
flush in the Face, immediately very quick,
and perhaps soon after surprisingly calm and
equal; and thus alternately. —

The Heat and Chills are uncertain and unequal, sometimes a sudden colour and Glow in the Cheeks, while the Tip of the Nose and Ears is Cold, and the forehead at the same time in a cold dewy sweat. Nay it is very common, that a high Colour and Heat appear in the Face. when the Extremities are quite Cold. The Urine is commonly pale, and often limpid, frequently of a Whey Colour, or like Vapid small Beer, in which there is either no Manner of sediment, or a kind of loose matter, like Bran, irregularly scattered up and down upon it. The Tongue at the beginning is seldom or never dry or discolored, but sometimes covered with a thin whitish Mucus. at length ~~these~~ it often appears very dry, red,

and Chapped or of the color of the pomegranate
ate Rind. but this mostly at the Stomach
or Close of the Disease. - Yet however
dry the Tongue and Lips seem, the
Patient scarce ever complains of that
the burning of a Heat in the Tongue.

About the 7th or 8th day the Giddiness,
Pain, or Heaviness of the Head, becomes
much greater, with a constant Noise
in it, or a rumbling murmur, which
is very disturbing to the Sick. - and
frequently runs an a continuum.

The Sads on the Praecordia, Anxiety
and Trembling grow more and more
violent, and they often fall into an
actual Convulsion especially if there
be a Attempt to sit up. Coldish sweats suddenly
come on in the forehead and on the back of the hands.

So at this time there is too much heat in
the Cheeks and the Palms, and as suddenly
go off. If the urine now grows more pale
and limpid, a Delirium is certainly to be
expected with universal tremors and
substituted delirium. The Delirium
is seldom violent, but as it were a
confusion of thought and action, muttering
continually to themselves, and faulting
in their speech: Sometimes they awake only
in a hurry and confusion, and presently
recollect themselves, but forthwith fall
into a muttering, doxy state again. —

The Tongue grows often very dry especially
in the middle part, with a yellowish
tint on each side, and it trembles greatly
when the Sick attempt to put it out. —
When the Tongue at this time grows more moist
and a Cobweb sitting comes on it is always a good sign.

But when a difficulty of Swallowing,
Continual Gubbing, or Choking in
the Throat supervene, it is a very
dangerous Symptom especially if
attended with any degree of Stinginess
Frequently Profuse sweats pour forth
all at once about the 9.th 10.th or 12th Day.
Commonly coldish and clammy on
the Extremities. Menses very thin
or are discharged; both the one and
the other are generally Colliquative
and very weakening. However
a warm Moisture of the Skin is generally
salutary and a gentle diarrhea frequently
carries off the Acuum and Comatose Dis-
position. Now Nature sinks apace, the
Extremities grow cold, the Nails pale or livid
the Pulse may be said to tumble and flutter.

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rather than ^{to} heat, the vibrations being ex-
ceeding weak and quick, that they can
scarcely be distinguished; tho' sometimes they
creep on surprisingly slow and very
frequently intermit. The sick become
quite insensible and stupid, and affec-
ted with the loudest noise or the strongest
light; tho' at the beginning strangely susceptible
of the impressions of either. — The Delirium
grows and in a profound Coma and
that soon in eternal sleep. The tears,
stools, urine &c run off involuntarily
and denote a speedy dissolution.
Trembling and twitchings of the nerves are
a prelude to general convulsion. All Persons
grow dead and stupid toward the end of
the Disease. An Imposthume of the Ear is
favorable or is a Carotis suppurates or a

Large pustular Angry Eruption breaks
out about the Lips and Nose. —

Cure

Bleeding and Diarrhoea Purges very improper
in it — Puke (a gentle one at the beginning
to cleanse the stomach) — Any thing
drastic the denouement in the progress of the
Vomits he thinks much less injurious and
even proper at times particularly at the
first attack. Clusters of Milk, Sugar
and Salt may be injected with safety
and advantage every 2 or 3 Days if
necessary. Temperate, Laxative, diaphoretic
Medicines are most proper in these fevers;
and a well regulated, suppurative, dietetic
Diet is necessary — The latter is judiciously
used will go a great way towards a cure

especially if Applied in well timed and
well applied Blisters and keeping
the Patient quiet in Body and Mind
But it should be noted that very strong
Phatics are very pernicious, however
want of Sleep or great ~~disorder~~
may demand them. Small
Quantities of Peruvian: Elixir or Pur.
Contraction. Comp. with a little Castor and
Saffron and in all quantities of
Theriac: and Romanita have much
better effect. Which by Rousing a patient
can sweat calm the nerves and remove
the Disorders and soft Digestion soon
succeeds - When the Confusion and Dejection
of Spirits are very considerable, Galbanum
or Lycium with a little Camphire, should
be added - and Blisters carried forth with to

applied to the Neck, Scapula or behind the Ears,
and during all this a free use of thin Wine
- when some pleasant Stew or Gruel,
with a little soft Wine, must be indulged.

Chicken Broth - Thin Jellies of Harts Horn
- say: Panado, are useful, adding a
little Wine to them, and the Juice of
Seville Orange or Lemon.

Profuse Sweats should never be encouraged
much less attempted by strong heating Medicine
such as Col. Ric. or R. & C. particularly
in the beginning, or advance of the Fever.

For they too much exhaust the Liquidum
Vitale and are followed by a vast excretion
of Spirits Humors, irregular, partial
Acute &c, a vast Load and Oppression on the
Procordia so as to incline the less cautious

Observe to think there may be something
pneumonic in it. but even here
the want of Bleeding for the Pulse will
be very small and unequal & very
quick. The Breathing in this Case tho
tick and laborious, is not hot, but a
kind of sighing or sobbing Respiration.
And the Oppression on the Praecordia arise
from nervous Anger, not from a peri-
pneumonic Infection. And this is very
manifest in hysterical Paroxysms

I commonly use the following Colic
and Saline Draught.

R. Pulv: Contrayerv. C. q^{ss} xv. Croc.
Anglic. q^{ss} iii. Confect. Raleigh. H^{ss} iyr.
Croc. q^{ss} i. M. f. bol.

& when vast tumors and Subcutaneous Indurum come on I use
Must Op instead of the Pulv: Contrayerv. C. with great Success.

R. Sal. b. l. S. Succ. Limon Ziss.
Ag: Alexet. simpl. Zib. m. peracta
effervescentia adde Sp. Lav. Comp.
Lyr. Coc, ana Zib. M. f. Haust.

These or the like, I order every 5th 6th or
8th Hour, and a temperate Cordial, such as
Sp. Vol. Anisat. or foetidus may now
and then be given out of thin Wine, or
Cider-Whey. or which is in many
Cases better, out of thin Mustard Wey;
which without any more pompous
apparatus is not a contemptible Medium
especially for the Poor.

a violent Eruption frequently takes place
where profuse Sweating accompanies —
Little Red Wine is serviceable —

Towards the Decline of the Fever, when
the Sweats are abundant and weakening
I moreover give small Doses of the Tincture
of the Bark with Saffron and Mace. Root.
interposing now and then a Dose of Rhubarb
to carry off the putrid Colliquies in the
first passages. He generally gave the Bark
at this ~~last~~ Period out of the Saline Draughts
which makes them more effectual. —

I have known Patients, 'He says', sink under
this Fever after having been kept in a
Sweating Method for 5 or 6 Weeks together. —
and after having gone thro 3 or 4 crops
of Miliary Eruptions. They all the while
melting away and welling in their own sweat
and the Bed wetting under them.

A gentle diarrhoea is sometimes of service

but then, Colliquative stools are very far from
being so - particularly when vivid or of a
lead color. Salivation always favorable
however weak and stupid his patient was
he never despaired when this was the case.
Nothing completely critical in this Fever. -
Fever often partly runs off by intestines
and urinary passages. - Now, tho' these
Discharges are many times profuse they
are not to be too hastily suppressed,
without causing a very dangerous
Translation of the nerve... matter
on the vital parts. Sweats must
be carefully checked and Blisters
ruled up with care. the more they
discharge the better. so that when the first
Blisters heal up others should be applied

to other parts - for it is not merely from
the Stimulus, but also from the Drains that
they make, that they are discernible.

The large angry pustules, that often break
forth at or after the State of this Fever
and frequently ulcerate and run largely
are a kind of natural Blisters, which
give vent to the putrid corrosive Jct or
and sufficiently indicate one way
of giving ^{nature} Relief. -

He considers profuse sweat in small Pox or
Measles very salutary.

*Of Putrid, Malignant, Petechial
Fever.* -

He observes, that the putridential and
malignant Fevers at the very onset, greatly
sink the Spirits and cause great weakness
Especially when from contagion.
yet Bleeding to some degree is most
commonly requisite, may necessary in
the strong and plethoric, and should
be done as early as possible. - a quick
tense pulse, sharp Heat, great Difficulty
of Breathing, Palpitation of the Heart and
Violent Pain in the Head and Back evidently
demand it. - In malignant fevers the
Blood drawn is of a much looser texture
and softer consistence, than that of Pleuritis.
He considers gentle Vomits useful but does

not approve of drinking too copiously of
warm Water during the Operation of an Emetic
he considers it oppressive to the Stomach.

Gentle Purgers. Manna. Glycer. Salt
Elixirs &c. — He cautions strongly
against drastic Purgers. Hoffman
cautions even against Senna. —

He generally gave a gentle Laxative the
8th or 9th Day unless I find some Eruption
appearing, or a kindly Sweat forbid it.

Up to this time, I seldom use any kind of
Purgative except a little Manna. Given
as a Laxative. Ordering an Emollient Laxative
Glycer every second or third Day. — This
gentle method of Purgings for many Years
he found of great Advantage but protests
against Aloetic, Scammoniac & Colocynthis Purgers.

It is always dangerous to suppress a critical
Diarrhea prematurely. — And should never
be done without premising a small
dose or two of Rhubarb. ^{tho} he often
found a Diarrhea salutary at the decline
of these Fevers. he generally found it
prejudicial at the beginning. Nothing
more certainly than a Diarrhea is in
itself useful, than when a gentle breathing
Sweat or warm moisture of the skin,
accompanies it. — ~~Tho~~ ~~for~~ warm
Breathing Sweats are the more certain
means of carrying off the fever yet
they are not to be driven out too soon
by hot Medicines. — As Val. & Kali &c.
He opposes Blisters - till fever is somewhat
subdued - as they are apt to produce Stomach
and other effects ~~more~~ of a pernicious tendency,
as Periwilium, Delirium, Tremors, &c.

9
He therefore advises the young Practitioner
before they deal largely in these wholesome
Severities to Consult Baglivi de usu et
abuso Vesicantium. And he advises when
Several Blisters are laid on in any acute Case
The Patient should drink freely of whey,
Emulsion &c. - otherwise he may suffer
almost as much from the Remedy as
from the Disease. Camphire he considers
an excellent corrector in such Cases.
And more especially it answers a more
important purpose in putrid febrile
Fever by promoting a Diaphoresis or
easy Sweat. and by no means heats
as much as Vol. Alk &c. Camphire joined
with an Opiate he says is the most certain
Sudorigic in Nature. But Opiates should never
be given but in small Quantities. as Elis. Purg. &c.

Camphire however has the fault of
being very disagreeable to the stomach
sometimes but when dissolved or rather
intimately mixed with Hot Vinegar
after the manner of the Julep. & Camphor
it sets much easier, and is a medicine
excellently well adapted to putrid malignant
fevers. for both Camphire & Vinegar are
highly recommended in pestilential fevers.
Heinisius had a statue erected to his Memory
for the service he did in the Plague at
Verona by a medicine, the Basis of it
was Camphire.

The following is the formula of the
Bark which he commonly used in all fevers.

R. P. Cort. P. Zii. Maud. uncut. Hipoc Ziss. Rad. Sarp.
Virg. Ziii. Croc. angelic Div. Cocculi Di
Lp. Vin. Gallie Zxx. f. Infusio Clausa per Alemb.
Dies (tres saltem quatuor) deinde Colatur.

Of this I give from ʒi to ʒss every 4th 6th
or 8th Hour with 10, 15 or 20 drops of
Elixir Vituli out of any appropriate
Draught, or diluted Wine.

He recommends a little Red Wine occasionally,
particularly in the decline of the fever acid=
ulated with Juice of Seville Orange,
or Lemon. It may also be impregnated
with some aromatics, as cinnamon &c.
And a few drops of Elixir Vituli.
A little generous Cider is not much
inferior to Wine.

An Essay on the Small Pox.

He recommends Copious bleeding when
the pulse indicates & vice versa. during
the Eructive fever of Small Pox. —

Bleeding instead of retarding promotes Eruption
by calming irregular Action —

In weak, Pulse, general Languor, Nausea
Dizziness of the Head &c. avoid V. S. —
Bleeding in the Foot is known to make
a Revolution in the Head — He advises
Bathing the feet in warm water before the
Eruption 2 or 3 times a day. The Head
should never be kept too hot and he
advices covering the Head & Feet.

If the Eruption does not advance equably
advices applying the warm bath to the
Arms and Head and even to the Trunk
of the Body. — He says he has frequently used it
with great success. —

The recommended bleeding in a recumbent
 posture - When Fear and Agitation of
 Spirits concur with the Disease there is a
 necessity of giving some of a cordial Nature
 even at the very beginning and that too
 sometimes even not sparingly - He says
 he is no advocate for the Hol Regimen
 Especially at the beginning of the
 small pox but observes it must be
 done in cases where after the super-
 = abundant quantity of Blood is drawn
 off the pustules thro' excessive fear
 and oppression of Spirits of the Patients
 lay buried in the Skin as it were and
 made no considerable advance for two or
 three days together - but I know this

must be done in such cases and Blisters
must be applied to Townth-Fluggin
Oscillations of the Vessels-on the Palate
certainly sink under the malady.
Yet in general I am not fond of
blistering early in the small pox unless
there is great reason to fear that the
Tongue fauces are likely to be greatly in-
fested with them - When the Disease
attacks with a Ravine, soreness or
great Heat of the Mouth and Throat
and a considerable sharp wheezing
or stoppage in the Nostrils with
frequent sneezing and a tickling
Cough - this is often prevented by
timely blistering - particularly behind
the Neck and Ears.

But to persons of a Cox Habit or having
been previously debilitated from any
cause withhold your Lentils - These gen-
erally have a pale sunk countenance
a weak quick, humming pulse, and
great Deflection of Spirits with pale
crude urine or Lumped Urine, alternate
Chills and Heat, little thirst and no
great pain but a perpetual Heaviness
and Sickness at the Stomach, Giddiness &c.
Here sack and Saffron are proper
with some easy condial and nervous
Medicines Sack Whey, Wine and Water
or the like. Sometimes large Quantities
of Wine are necessary - A ^{gentle} ~~small~~ Emetic
will sometimes bring on the Eruption Surprisingly.

The Emetic should not be given antecedent
to Bleeding - and before Plethora is removed -
immediately succeeding the Emetic Calamine
to the feet - The Emetic has another good
Effect that of evacuating the contents
of the Stomach and intestines - Gentle
Doses of Salt Rhubarb &c are necessary -
even if a Deunka is urgent a little Rhubarb
is necessary - A Moderate Salivation
to be encouraged but if profuse injures
Gargarism should be diligently used -
Frequent ~~metemesis~~ unless proceeding from
Blisters is a very bad Symptom.

In the Crisis ichorosa, indigestible Pox
and profuse Phytism where the skin and
Pustules are pale or livid, the Pulse weak.

11
The Urine thin, watery, crude, the Warmer
Medicines are necessary - such as Pulv:
Contrayerv. C. Myrrh, Mastic, Saffron
Camphire, Theriac, Mithridate, Confectio
Cardiaca These are of vast service
in raising the pustules, and digesting
the Matter and may be washed down
with sack whey - Decoct Tuberculd. or
a little Coffee is an excellent thing
for common drink - Small Doses of
Opium are here Regressive - but in
fevers of any description never ought
to be given in large Doses - as they
produce Luper and Debility - They
Opium is infinitely beneficial in removing
irritability &c - they are more useful joined
with opium & Sulfurum &c -

Blister here should be used freely -
Nitre, Lp. & Dulc. by increasing
flow of Urine often very useful -
Patients who cannot urinate easily
may be often aided by sitting them up -
Diarrhoea should never be checked too
hastily without prescribing a Dose or
two of Rhubarb - and then proper
Astringents as Opium &c.

The never observed acids, Veg. or mineral
are useful in the Chryselline Poi but often
found them very much so in the female
black confluent with Pellicula in
such cases. Cort Peruv. & E. Vite frequent
are very useful - The Bark should never
be given where the Respiration is difficult

the Body very costive hard and turned
till these are removed -
He uses the Tinct. Cort.

If the Pock assume a dark color and
the temporal arteries throbb much no small
Danger is nigh - When the Swelling of face
hands &c suddenly subside and the Pock
assume an umbilical appearance. the
Danger is great -

Clysters to be used every 2 or 3^d Day.

Anodynes very necessary at and towards
the Crisis

On the Approach of the secondary fever it
takes place at the Tissue of the Pocks
about the 7th 9th or 11th Day from the Eruption
we are often surprised to observe symptoms
it is frequently to be met with the Lament
if Phrenitic or Pneumonic symptoms occur.

on the contrary if the Pulse sinks you
are to give Quantity of warm Wine -
Gargles - Cyder and Honey - Vinegar and
Water with a little Nitro or crude
Sol. ammoniac - Mustard boiled
in the Gargles is often very useful -
A gentle Vomit is often useful to remove
phlegm - Drinks Wine Whey Cyder and
Water &c - Linen should be often
changed - Opening Doors Windows &c
In the Decline of the Disease Clysters
Remarkably useful -

A Dissertation on Pleuritis
and
Pneumoniae.

Chap I

Of the Power of the Winds and
Seasons in producing these
Distempers.

According to Hippocrates cold north-
easterly winds bring on Disorders
of the Breast, Sides and Lungs.
~~as also~~ when a ~~cold~~ particularly
if accompanied for a considerable
time with a cold dry season.

Blood drawn in such seasons is constan-
-ly found more dense and viscid than
in long and moist seasons.

Asthmatic Persons affected most during
the Continuance of North easterly
Winds.

Cold air shuts up the Excretory ducts
of the Lungs and hinders a due Exhalation.

Extreme cold air hath caused an absolute
and sudden Stagnation of the Blood in
the Lungs. and killed almost instantaneously.

When a greater Quantity than ordinary of
dense & viscid Blood is thrown on the Lungs
and when the Vessels of the Lungs themselves
are inordinately constricted, and the excretory
Ducts and Crifices of the ? canals of the
Wind Pipe, Bronchia & are considerably
obstructed, that Peripneumonic Inflammation
will be very readily generated. —

As the Arteries & expanded or membranous parts
are extremely small they are of course liable

to be obstructed by a gross fiery Blood. and
hence Rheumatisms are very common
in such seasons.

Of the Pneumony, and Hemor-
-pneumony.

Huxham says there are very different
Degrees of Pneumony which demand
a particular attention, and a method of
Cure peculiarly adapted to each.

For a Pneumony arising from a violent
inflammation of the Lungs, by a very
fiery dense Blood obstructing very many
of the pulmonary and bronchial arteries
is quite a different Disease, and requires
a very different Treatment from an
Obstruction of ^{the} Lungs, by a heavy, viscid
pituitous matter; as is the case in what
late writers call a Pneumonia Motta

And this again should be managed in a
Method very different from that, which
is proper in one depending on a third
acid Effusion on the Lungs. There
are some general Symptoms common
to them all, particularly a Heat at the
Breast, a short difficult Breathing
a Cough, and more or less fever which
few obvious Symptoms however give
the general Denomination of a Pneumony.
Tho in Nature very different and to be treated
very differently - For in the first Case
free, large, and repeated Bleeding is
absolutely necessary to lessen the quantity
and Force of the too Rapid Blood, with
the most cooling, Relaxing, diluting
Diet and Medicines.

— In the second : our Blood indeed may
 be drawn off at the very Beginning, to
 prevent the further Impaction of the Obstruction
 Lentor, and make Room for proper
 inciding, diluting & Attenuants. But if
 you are too busy with your Lancet, you
 weaken the Patient, not the Disease, which
 requires Attenuants, Purgants, Expectants,
 gentle Pukes and proper Purgers with the
 use of History, which I think are
 quite in the former Case, unless towards
 the Close of the Disease, when they may
 be sometimes necessary. The third Case
 may require Bleeding also, to hinder
 the Advance of the Inflammation;
 but here the soft, lubricating, demulcent
 Method, with some proper and frequent
 Opacates in Moderate Doses, are demanded.

which in the second case would be utterly
=ly deleterious. —

Great Regard must be had also to the
different Stages, even of the same kind
of Peripneumony, and the different
Symptoms that attend it. For, tho'
at the Beginning of a severe Inflammation
of the Lungs, large and repeated Bleeding
may be indispensably necessary; yet
if, after the second or third Bleeding.
The Patient begins to Spit off freely
a well concocted Matter tinged with
Blood, you are to restrain further Evacuation
that Way — Otherwise you weaken your
Patient without Necessity, and often
entirely suppress the Expectoration to
his utter Ruin — And yet if a comfortable

Quantity of thin, florid, purpureous
Blood is spit off, you should draw
more Blood, quiet the Cough with
Cool opiates, as Diacodium, or
the like and give pretty freely
of proper Acids with soft cooling
Incrasants: Whereas if it is a thin,
gleety, dark colored matter that is expectorated,
it is generally a Mark of greater Malignity
and that the Blood is in a putrefying
dissolving State, and will by no means bear
a large Emission of blood.

He advises bleeding from a large Orifice
and to stop on the appearance of faintness
He, advises bleeding in a tumorous Portion
That Persons do not bear bleeding as well as
lean and muscular - as rather having too much
of the red globular part of the Blood - Nor their vessels.

is elastic - The Age and choice of the Person
are to be considered - It would be absurd
to draw as much from a Dwarf as a Giant.
In general

The more violent the Horror or Rigor
is at the attack - the more violent is the
succeeding Fever. If the symptoms are
not relieved by the first bleeding after
8, 10, or 12 Hours, more Blood should
be drawn, may even sooner if they
become more aggravated - and this must
be repeated, if the Fever, Oppression, Anxiety
and Difficulty of Breathing increase, or
continue equally severe - Especially if
the Blood drawn appears very firm and
dense, or covered over with a tough yellow
Coat or Buff as it is called - which however
very frequently doth not appear till the 2^d or 3^d
Bleeding, tho' the symptoms may indicate a very high Inflammⁿ.

(14)
and this very often happens by the buckling
of the Blood down the Arm from a small
Orifice, too strict a Bandage or by
the sliding of the Skin over the Orifice:
by any of which the Blood is hindered
from spouting forth in a full stream.

This dense buffy appearance of the Blood
with a firm strong pulse, will warrant
the drawing off Blood, till the Respiration
at least becomes more free and easy.

But if the Crassamentum or concrete
mass is of a very loose Texture, and
not covered with a firm coat or Puff
and the Pulse seems to sink, flutter, or
grows more weak and smaller Bleeding
it is time to desist and try other Methods
of Relief— A thin bluish film on the

Blood, with a kind of soft greenish jelly
immediately underneath the crust
itself being livid, loose and soft, with
a turbid reddish or green serum, is
a sign of a very low crisis of blood,
and great Anemia, which will
bear large quantities to be drawn
off. — May even a very fluid, thin
loose blood, that gives off little or
no serum after standing some time
however specious it may appear to
unexperienced persons, is far from being
the good blood they imagine. But
generally argues, in the disease especially, a
very considerable advance to a putrid and
very acid state. — For by mixing sp. s. c.
or sal ammon. w blood from the most

Health as it runs off, it always
puts on such a florid appearance
and gives off little or no Serum. However
long kept, but still remains loose
and as it were half fluid — It
is observable that Sp. C. C. used
frequently, or power. the Blood and
brings on profuse Haemorrhages —
A strong Throbbing, quick Pulse in Pleur
= pneumonies always indicates further
Bleeding at least to some degree
of Ease in breathing or a free Expectoration
of laudable matter is obtained. but it
frequently happens that the Pulse, even at
the very beginning, seems obscure and
oppressed, irregular, sluggish, and sometimes
intermitting, the Patient at the same time
complains of great weakness and Oppression

which would seem to contraindicate
bleeding; and yet the Lead at the
Breast, Difficulty of Breathing, great
Anxiety and Heat felt about the
Præcordia loudly demand it.

This often puzzles the young Practitioner
but he should consider, that such a
Sudden Want of Strength, Spirit, and
Pulse, doth not arise from Want of
Blood, as the Duration of the Disease
for a few Weeks, or a Day or two, cannot
be supposed to have exhausted the
Vital Fluid to any considerable
Degree - The Truth is not the Defect
But the too great Quantity of Blood
in such cases is the real Cause
of these Symptoms.

For the Blood Vessels being overloaded with
 Humors, and distended beyond the
 due Tense, cannot act with sufficient
 Vigor. The Equilibrium between the
 Solids and Fluids being not
 duly kept up, the Moving Vessels
 are unable to protrude the Blood
 with a due Force. Just as too great
 a Weight on the Embolus of a Syringe
 hinders its free play. In such
Letting Blood is so far from weakening
 that it really raises the Powers of
 Nature; as is always evident in
 drawing Blood from plethoric
 Persons, labouring under an oppressed
 Pulse, as it is properly called, which
 is found constantly to rise on bleeding.

In some very violent Pneumonias, where
both the Lobes of the Lungs are greatly in-
flamed and obstructed, an immediate and
excessive weakness comes on, with an
inexpressible anxiety, and oppression at
the Breast, a very small, trembling Pulse,
Coldness of the Extremities, with Clammy,
Coldish, partial sweats, the Eyes staring,
Jaws and inflamed, the face bloated
and almost livid: and all this soon
followed with Stupor, Delirium
and I have seen in some cases (the few
indeed) with a complete Paraplegia.

This is in truth a very dreadful case, but
doth not arise from want of Blood, but
from want of a due circulation and
Distribution of it. For there being so many

and great obstructions in the Branches of
the Pulmonic Artery, the Blood is ponded
up in the Lungs, and hindered from passing
freely, as it ought, from the Right Ventricle
of the Heart to the Left: so that the Aorta
and its branches do not receive Blood
enough to carry on the common Offices
of Life, on which soon follows and ab-
solute Stagnation and immediate
Death. Dissections have shown this to
be the Case; the Lungs have been found
quite stuffed up with Concreted Blood,
red, hard, and as it were fleshy or rather
of the colour and consistence of Liver, and
so heavy, that any part of them will sink
in Water. — If any thing can be

in the most deplorable Case, it is by
early and immediate Bleeding, or
it becomes in a very short time utterly
irrecoverable. — I have seen several
surprisingly good Effects from bleeding
in both Arms at once. when done
in proper Season. —

And yet there are some kinds of Peripneumonies, that will by no means
bear large Bleeding. as has been noted
by Physicians of the best Authority.

And I have observed the same in several
Epidemic Peripneumonies, particularly
in the latter part of the Year 1745. and
the beginning of 1746. During which we
had an Epidemic Peripneumony, in which

after a second bleeding / and sometimes
 after a single bleeding / the Pulse and strength
 of the Patient sunk to a surprising degree
 and they fell into a sort of nervous Fever
 with great Tremors, Sudoribus Torpidum
 profuse sweat, or on the bilious Jaundice
 with a black tongue, Coma or Delirium
 Tho at the beginning the Pulse seemed to be
 full and throbbing and the Pain, cough,
 and Oppression to very urgent, as to indicate
 Bleeding justly, largely strongly. Now in
 these cases the Blood was seldom found buffy
 to any considerable degree, but commonly very
 florid, and of a very loose and soft consistency
 or very dark colored, and coated with a very
 thin and bluish or greenish film, under it
 was a soft greenish jelly and a dark livid

crust at the bottom. - Sometimes indeed
the coat was much thicker and more tough
but of a pale red color resembling the corrosion
stone or oxide of red cinnabar.

This last appearance I have frequently
Noted in Real Pleuro. Pneumonies
Whenever I see such a loose or poised Blood
I am very cautious how I advise further
Bleeding, especially if I find the pulse
or the patient become more languid after
it, however the oppression, load or even
Pain, may seem to require it. It
was from Observations of this kind
that Lancisi, and Baylini from him
caution against further bleeding, when
no dry coat appears on the Blood in the
second Bleeding. —

and I connect with that in the first
parts of the Prognostic as well as the last,
having always found the very florid
Blood, drawn in the beginning of pulmonary
fever of very acute sort it shews,
that either the Crasis of the Blood is very
much broken and dissolved, or that the gross
inflammatory Blood flicks in the Pulmonary
Arteries, and that nothing but the very thinnest
and most ferrous Part can transude and
pass into the Left Ventricle of the Heart.
I cannot but observe however that sometimes
in Peripneumonia and Pleuro-pneumonia
the first and even the second Bloods
shall not appear buffy, and yet the
kind shall be very fiery, and this particularly
if the Blood tickles soon the Lungs and
does not come off in a great deal.

but then it is ever to be observed that the
blood tho' apparently florid, when cold, is
very dense and tenacious,; whereas in the
Case I mentioned above the blood
tho' very florid, was of a loose and soft
texture, and never formed into a
regular firm coagulum.

Such ^{blood} was frequently drawn from
sailing Persons in the beginning of the
Year 1746 and was always attended
with very ill Symptoms, very often
fatal - Such Malignant Pneumonia
indeed very frequently happen to Sailors
after long Voyages, and to Persons very
Scorbutic. in such Cases large bleeding
is not likely to be successful.

Though the appearance of a, pretty thick
fry coat on the blood is in general
no ill Symptom in Pneumonic fevers.

Yet when it is excessively tough, and
 extremely yellow, or of a pale lead color,
 it threatens Danger, and shows the insu-
 perableness of the Labor is highly wrought
 up, and is vastly difficult to be resolved or
 to be expelled —

When the Pain remains almost as violent
 as ever after the 4th or 5th Bleeding, and the
 globular part of the Blood hath been
 so reduced, as that the Suppurant
 hath scarce been a sixth part of the
 Volume of the whole Blood, and is
 yet as hard as a piece of flesh —
 These Cases are generally mortal —
 If after the 2^d or 3^d Bleeding, or, if
 after the first, your Patient begins to spit
 off freely a yellow coagulated mass,

lightly tinged with Blood - ~~stop~~ there
and particularly if the Breathing becomes
free, as it commonly doth - otherwise
You will weaken your Patient to no
purpose, nay to a bad one - and quite
suppress the Expectoration, by which Nature
is now throwing off the Disease by the
most proper crisis and ready issue
The obstructing Matter in the Extre-
- mities of the bronchae and pulmonary
Arteries being so far resolved, concocted,
or digested, as to pass off freely into the
Cavities of the Vesicles, Bronchia &c.
and be up and out of the Trachea
by cough and Expectoration. That there
is a passage from the Bronchial Arteries, into the
Cavities of the Trachea and its ramifications, is

evident, for the oily mucus which in a
natural state lines and lubricates the
internal Membrane of the Esophagus
Arteria and its Branches is separated
from the bronchial Arteries. — So
the matter is thrown into the cavity
of the bronchia and so out of the
Lungs by expectoration. — For I think
it is pretty certain, that some Hemoptoes
do not arise from a Rupture of the Vessel,
as no Menses of Pain, Pericarditis,
or the like precede, succeed or accom-
pany them. —

It hath been ^{an} Observation of the very Nurses
that all those who spit Blood do well.
However this is not always true — For when
ever either very frothy, or finceu clotted Blood is
spit up, or black and partly Coagulated, purpy

liver colored Blood, it is quite different,
Extravasated Blood remaining in the Lung,
becomes a putrid serum that destroys the
very substance of the Lung. Bleeding is
of very little use when an Abscess is forming
particularly when the Phlegmon is so far
advanced as not to be resolved - induced
Bleeding is then rather disadvantageous
as retarding the next operation of Nature,
to free herself from the offending
Matter, by a kindly Suppuration. For by this
Means the Matter is made to stagnate longer
and to grow more and more acrimonious
which at length by affecting the adjacent Parts
forms a much larger Imposthume than would
have happened at first, if Nature had been left to
her own regular proceedings: very many times
it ends in a downright gangrene -

and sometimes in an obstinate manner, making the short remains of life extremely miserable. After the 4 or 5th Day of a true Pneumonic Bleeding is of little avail to prevent the suppuration. For most Phlegmons begin to suppurate in that time if not resolved before. This will more especially and sooner happen in such a part as the Lungs, surrounded on all sides by a vaulted membrane, and so near the Heart acting on the inflammatory obstruction with constant and great force. So that where the Pneumonic symptoms continue with great violence for four or five days or more successively, an Abscess, or Mortification, is just to be feared, and little advantage is to be expected from further Bleeding.

But yet, if either the Pain returns
with Violence after having ceased a
considerable time or seizes another part
of the Breast; it is an Argument that
a new Inflammation is forming, which
indicates Bleeding as much as the former
the not to the same degree for this
Accessary Seizure being attended with the
same Nature, and on the same Organ as
the former requires the same Method to
prevent its Advance and further ill
Consequences. The Strength of the Patient
and Pulse, the Violence of the Pain,
and difficulty of Respiration, are in
a great measure to determine the Quantity:
and some Regard must also be had to the
Color and consistence of the Blood and the

Quantity and Quality of the Serum. I have
sometimes ordered Bleeding the 9th or 10th
Day from the first attack, and found the
Blood almost as fiery as what was drawn
the 2^d or 3^d and that too when the Lanet
had not been liberally used.

But the Crapementum tho' exceedingly
tough, was greatly reduced in the
proportion it bore to the Serum.

It is commonly observed, that as soon
as the secondary attack and Pain come
on, with any degree of violence, the
Expectoration tho' before free and copious
ceases altogether, or is performed with
great difficulty. The Violence of the Pain
not suffering the Thorax to be duly expanded
and the Muscles of the Lungs, Breast & Abdomen

to act with sufficient force to reject the Matter.
Not to mention that the Inflammation
renders a due secretion of the lubricating
Mucus, which should naturally be
separated to smooth over the internal
Membrane of the Trachea and Bronchia
and expedite the Discharge of any Matter
contained in them. — and we eventually
find that, after the Inflammation is abated
by Bleeding, the Expectoration returns
with ease and freedom. So that in
Pneumonia and Pleurisy, pneumonia
you are chiefly to make use of evacuation by
Bleeding before the crisis. After one
fresh Attack of violent Cough, difficult
Respiration and suppressed expectoration,
you are to begin again with venesection,

but with great caution and moderation:
 As all Telapses in these cases especially, are
 dangerous, the sick growing daily weaker
 and less capable of bearing any considerable
 loss of bloods and therefore it will be
 very imprudent, upon every little pain, to have
 recourse to bleeding; for now or less pain
 continues, particularly after Pains ~~perish~~
 very often, a long time after the fever is quite
 gone off: But bleeding is, in a particular
 manner, proper when a copious Ex-
 =pectoration of candid Matter goes on
 pretty early, tho' it should still continue
 tinged with blood, for the Reason I hinted
 above; viz that it indicates the Resolution
 and concoction of the Matter of the new
 Inflammation. Now it is for this new
 reason to be avoided, tho' often imprudently

ordered, and affirmed. Stupidly administered
to Testify this slight Drugs of Blood:
but its by Persons who have very little
attended an Antient & Modern, and
up to Hippocrates her great Interpreter.

It is without all doubt vastly more
proper to alleviate the Pain and the
Importunity of the Cough by gentle
Quater, cooling, soft, Demulcent,
and easy Expectoration. After general
Bleeding has been carried to a con-
siderable extent - Topical Bleeding
is recommended - as Bleeding in the
Larynx. - Cupping &c. - In asthmatic
Coughs, Defluxions on the Lungs &c
he recommends Blisters, Issues, Setons
cupping &c.

Besides Bleeding. Titian medicines the same
manner, together with a moderately cool
free air, and as much quiet as possible
both of Body and Mind. Large well
timed Vomits are very beneficial. —

The more easy, early and large the
Concocted Expectoration is, so much the
better. Indeed generally at the beginning
it is crude and thin, but soon becomes
of a whitish Yellow Color and greater
consistency, when Matters proceed tightly
and about the third it is commonly streaked
with Blood. or the Blood is so incor-
=porated with it as to give it a bloody
Tinge. This kind of Matter when freely
spit off, gives great relief to the Respiration
Pain and oppression at the Breast, and generally
terminates the Disease in seven Days.

But nothing more effectual, in order to
=ication, by attenuating and resolving the
impacted Matter, than drinking freely and
frequently of cooling, relaxing, and gently
=aponaceous Lixents; such as the Whey,
The Barley Pottage with Licuorice,
Tis. &c. The Decoction, or rather infusion
of the pectoral Herbs as Ground-hog.
Maiden Hair, Colts. foot - Hyssop &c.
These should be acidulated with Lemon
Juice or Citrus Range - Honey be-
comes very useful - and its griping
quality may be entirely removed by
boiling - ~~Drink~~ Any of them drunk
warm and taken in frequent but small
draughts - sipping them as it were perpetually.
Hippocrates recommends Barley Water, Honey &
Water, Oxy-mel, and Vinegar & Water. -

I have known the same the value of
Vinegar itself of no small service in
Malignant Peripneumonies. The
Steam of Camphorated Vinegar is
no contemptible thing in such
cases. I have several times given
an Emetic in Peripneumonies with
great advantage, when the Expectoration
hath been suddenly suppressed, and the
Difficulty of Breathing greatly aug-
mented - but it was when a prodigious
quantity of Blood had been evacuated
antecedently, and the Violence of the Fever
Abated: - but in such Cases very little
should be done & afterwards to promote
the Venosity - He Commended Oxy-mel Scitell.

The utmost care should be taken never
to give strong Expectorants in the
Beginning of Peripneumonias, till
proper Bleeding &c may have allayed
the impetuosity of the Blood. and here
otherwise they will increase the Inflam-
-mation and Danger of Suffocation
and eventually intercept what
they were designed to pump up. The
Matter should be first concocted
and then expectorated. — Another
thing is to be observed that we do
not bring on any considerable Suppur-
-ation which will certainly supersede the
Expectoration and endanger the
Patient's Life.

Some kinds of Expectoration are of very
ill Omen it is particularly a very ill

sign, when much ~~pure~~ ~~thick~~ florid
or frothy Blood is spit up. and this
it is pronounced by Hippocrates and
Aretaeus; tho' they both speak so
favorably of the concocted matter
that is expectorated with a bloody
Singe — This fresh frothy Blood proceed
from a rupture of Arteries in the
Lungs — now if Arteries are burst into
the Lungs, the Blood gushes into the
interstices of the Bronchia, sometimes in
such quantities as to occasion a sudden
suffocation if not immediately brot up.
Hippocrates declares such a kind of
Expectoration exceeding dangerous,
And mentions a case of Person who

at the Close of a Peripneumony, by
one Mr. Clark, who spit up pieces
crematory colored Spleen. rather
more spongy but very foetid. He
died the 19th Day of June -

Many times Vesicles are visible in the
innermost recesses of the Lungs, part
of which may indeed be soon spit
up fresh and florid, but much is
very apt to remain in the ultimate
ramifications, and cellular inter-
stices of the Bronchia - which stuffs
up the lungs, compresses the surrounding
Blood Vessels, and at length putrefies
and corrodes, and absorbs it -

Q
as soon therefore as this Expectoration
of florid Blood appears, I immediately
direct Bleeding in such quantities as
are adapted to the Strength of the Patient
in order to abate the too Rapid Motion
of the Blood, lessen the Inflammation
and prevent as much as possible the
further Effusion of Blood amongst the
Pulmonic Vessels where it would
do infinite Mischief. — Besides
this various medicines — I use
A Decoction of Red Poplars acetate
with Chlor. t. l. makes an admirable
Drink in such Cases. — but Disapprove
of the use of Quinine in large Doses in
such cases.

In the Catarrhal Pneumonias we
recommend Purges — Cough attended
with Hem Defluacion — Elixir Asthmae,
with Spermacetille — The Putrid
Pneumony to which sailors are
addicted will not bear repeated
bleeding — in such cases Bleeding
is not useful — Diluents and the
Vegetable and mineral Acid,
very efficacious —

Matter should be spit off early and
easily in Pneumonias and
Pleurisies, the colour of it should
be a yellow well mixed with ^{spittle}
or a concocted yellow Matter that
is tinged with some but not too much
Blood.

the sputum yellow unmixed; putting is bad;
when very bloody or vivid it is dangerous.
The sputum yellow unmixed putting is
bad; when very bloody or vivid it is
dangerous: especially when this appearance
is very early but that which is quite
black is worst of all. It is an ill sign
also when it is very green. Whatever is
spit up with great difficulty, violent
cough; and no Relief to the pain
and Oppression, shews the Case to be bad.
He recommends blisters very warmly -
but a profuse diarrhoea is unfavorable
to suppress the Expectoration. &c -
and considers a Diarrhoea a bad Symptom

the Body
He observes that should not be too
Cautious on Account of the Fever
nor too soon on acct of the Expec-
-tation and the Strength of the
Patient failing — for when there is
a great flux of Humor downward
the superior parts grow dry, the Spitting
Ceases and the Sick die — Hippocrates.
Sometimes the Menstrual matter is cuticously
translocated to the lower parts, producing
Erysipelas, Imposthumes, Erysipelatous,
or Ecthymatous Swellings, Ulcers &c.
Particularly in Persons formerly subject
to swollen or sore legs which are frequently
noted to swell or break up again at the

of Pleurpneumonia Puridus, is the great
 Relief of the Breast: drying up blisters
 in the legs ~~the~~ suddenly the Lungs are
 apt to be forthwith affected and Hydrothorax
 depends of these parts should use by rapid
 bleeding immediately bring on asthmatic
 Complaints - A Deviation to the legs by
 rapid Bleeding, Blisters &c are successful
 in Affections of the Breast - He observes that
 Blisters on the Legs that cicatrize sooner have
 been found to be frequently successful -
 Drying up Blisters suddenly he says, often
 produces colligative hæmorrhæa.

Pleurpneumonia tibia.

Great Load at the Breast, Breathing very
 difficult, and the Cough, Fever and Heat
 are small, many times scarce perceptible, the
 Pulse either quick, weak, and small or sluggish

and Oppressed, never hard and tense
Commonly finds the old and phlegmatic
the weak and lax, the fat and unwieldy
and one most ripe in wet, flabby, foggy
weather and Winter seasons - whereas the
true inflammatory Pneumony generally
attacks the robust, vigorous and active
and is most frequent in cold dry weather
during North East Wind, and high stations
of the Barometer - This Disease viz
is called Peripneumony! seems to have its
Origin from a putulous action of the Blood
and a Topy Disposition of the Lymphs
and Serum is being greatly redundant
from - perhaps Per, irritation - it flows
on the Lungs faster than it can pass off
and congest and obstruct the Pulmonic Vessels

in at last a fatal Stagnation ensues
and Death is the consequence - instances
of this kind occur in Girls labouring under
Leucophlegmatic Cholera -

The Physician must be regulated by the
Pulse in Bleeding - with a rapid, strong
or quick and tense pulse, it should be so
freely used especially if I previously
knew the labouring Person to be of a
weak, lax or Phlegmatic Constitution
but when with difficult, ^{hot} Breathing
coupled to a full strong, pulse or a very
tense & hard one a strong and Vigorous
Person the lancet may be much more
freely used - so that when the Pulse is
weak and low, the Heat little, or not
considerable above the natural, The Urine

pale or red and so on - I must proceed
with great caution in Bleeding a
Pulmonic Patient, tho the head and
oppression at Breast may be very ur-
-gent - And in Event when blood is
drawn from a Person under fastid
Pneumony it either appears loose
thin and florid, or more commonly of
a dark livid hue, and not coated over
with a thick viscid Buff as in common
Inflammation of the Liver - And
it is observable that the Patient soon
finks, and grows considerably weaker
after such an Evacuation tho for the
present seemingly relieved as to the
anxiety and load on the Praecordia
and it is certain that common catarrhal fevers
in which a ferous Colic is abundant will

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not bear any of the Bleeding, much less a
Peripneumonia Pleuræ when a strong
Pleuritis is predominant - Physician
should be on their guard in respect to the
Complaint the Milder of the symptoms
it but one apt to mislead - it has some-
times been taken for a new fit or for
= chondriacism - But a when a perpetual
laborious Wheezing, great Anxiety and
Constant Oppression on the Precordia
Convulsive symptoms, Cold Extremities, and
Dark Lead Coloured Nails and Visage
are come on, the Physician must be
more stupid than the Patient not to see
the immediate Danger.

I think in general more or less Blood should
be drawn in the beginning, but during the
Operation the Patient should be kept in a
recumbent posture by which Means faintness is
avoided.

but as to the Repletion of Bleeding and
I should be very cautious and well consider
the State of the Blood, the Strength of
the Pulse and Patient before we advise
it - it is undoubtedly sometimes necessary
- we are frequently obliged to bleed the
- heated in asthmatic Paroxysms -
Blisters should succeed Bleeding -
An Infusion of Pectoral Herbs, as Ground
Ivy, Hyssop, Penny royal, Liquorice
or a thin Mustard Whey sweetened
with Honey and sharpened with
Lemon, are proper for common Drink.
As it commonly attended with frequent
Nights to vomit - This should be encouraged
indeed Vomits are often very efficacious
after some Blood has been drawn

a Spoonful or two of *ex ymca* *Sil-*
-lectum or *Vin. Ipecac.* with a few
Draughts of Mustard & *Wey-* or the like
are sufficient, a large Quantity of any
kind of Liquor should not be drank

This jumps up the Catarrh &c.

Vinum Benedictum or *Antimonial*
he considers highly useful as an
Emetic Inducible &c - he says from 10
to 50 or 60 Drops it is an Astringent
Alterative Diaphoretic and Diuretic;
a few more gently purge; and every
one knows a large Dose strongly vomit

In good hands it will certainly do
great things - The timid, low, insipid
Practice of some is almost as dangerous
as the bold unvarnished Empiricism

g. time - Time and Opportunity seem
to be expended are often lost by the
former, whilst the latter by a bad
Pulse sends you off the stage in a
Moment. But as Bleeding is on
the one hand is ^{to be} used with caution
in this Disorder so on the other and
very heating and stimulating Medicine
especially at the beginning of the Disorder
- for otherwise not only the Effusion
on the Breast is greatly increased, but
a comatose Disposition is ^{readily} ~~immediately~~ brought
on.

Blisters should never be neglected in a Pleurisy
Natha, as not only fricables promissis attenu-
ating and stimulating readily but as drains
to the Morbid Collection.

2nd

a large Blister to the Neck should always
be set on at the beginning, and Gustatives
to the Legs on. &. Ruptures are often found
to relieve the Head and Breasts when
other Methods fail. But as it frequently
happens, in the Disorders, that the Limbs
grow torpid and coldish a very bad
symptom! They should be well
rubbed before the Blister are laid
on and then well wrapped up in
flannel / which by the way is frequently
also necessary in low nervous fevers
for this very much promotes the Tearing of
the Blister, and the consequent Discharge.
When comatose Symptoms remain and
a very difficult Respiration, you may draw
off more blood by cupping and leeching

the Neck and Shoulder, when you
cannot venture to open a Vein again.
Frequent Stools are certainly useful in
the Disease: Sydenham's Adviser is purging
every other Day - but I think this is
overdoing it - The Bleeding and Purgings
too may be necessary at the Beginning
yet it is seldom proper to repeat
the former and the latter must be
managed with some Caution,
especially when repeated. For the
Patient is apt to fall into faintness,
Cold Sweats, &c unless properly supported
during the Operation - with some
Nutritious Drink - There is one thing
to be observed as to both these Evacuations

and that is if the sick spit largely
a concocted Matter is is sometimes
the Case even in the Pleurisy
Neither one nor the other is proper
and laxative Clysters or mild Ec-
coprotics only should be given
and the Mustard-Whey Hydromel
or pectoral Decoction, with a small
Quantity of soft white wine in them
should be given frequently to promote
it - Hippocrates, in several Places, advises
Hydromel and sweet and Watery
wine in Pleurisy and Pneumonia
to promote Spitting -

Nitru, Gum. Ceti - Cinnabar - Saffron

Pulv. Contayau. Camphire - Lac
Ammoniac - Elecampane Root
Liquorice in Decoction - The saline
Draughts to loosen the viscous Sputa
and oily Medicines are best here
and so are the highly Stimulant and
Volatile if given too early, tho' they
sometimes have a good effect towards
the End -

Of Pleurisy

a Pain on either Side of the Breast
attended with an acute fever, is commonly
called a Pleurisy, and then whether it
arises from an inflammation of the
intercostal Muscles, the Pneumothorax of the
Ribs or the Pleura itself, is lost in
the only true Pleurisy, the former is

being a species of an inflammatory
 Rheumatism, and are called Catarrhs or
Purulent Pleuritis. - However as they
 greatly affect the Respiration, when violent,
 they are always attended with much
 more ill Consequence than Rheumatic
 Pains in other parts of the Body, and
 demand a particular regard, and
 a speedy Removal. For as the Violence
 of the pain hinders a due Expansion of
 the Thorax, the Respiration is immediately
 affected: Since the Lungs not being sufficiently
 inflated, the Blood cannot pass freely from
 the Pulmonic Arteries to the Pulmonic Veins,
 and so into the left Ventricle of the Heart.
 Whence a Congestion, and some degree of
 Stagnation of the Blood in the Lungs will arise.

Now as the right Ventricle of the Heart is
Continually throwing more Blood into
the Pulmonic Artery, its branches become
more and more distended, till at length
they are rendered so very turgid, as to
press on and obstruct the branches
also of the bronchial Arteries; and
thus an inflammation of the Lungs,
or a complete Pleurisy, is often
the Consequence of a true or bastard Pleurisy,
especially when the Blood is very viscid.—
Indeed whatever interrupts a free Inspiration
and Expiration is apt to produce this. Thus
sometimes a Pleurisy brings on a Pleurisy.
the free Passage of the Air ^{thru} the Glottis into
the Lungs being obstructed.— Hoffman

take Notice that even flatulent and
spasmodic Colics, continuing any time
are often succeeded by Pleurisies and
Peripneumonies. The Pains, Spasms,
and Flatulences impeding the free
Action of the Diaphragm. and
further also as he says, by hindering a
due passage of the Blood through the
Viscera of the Abdomen by which
too much is thrown on the Lungs, Pleura
&c. — ~~It sometimes~~ And Pleurisies of an
very apt to become Pleuritis Peripneumonia

Indeed it sometimes happens, that upon the
coming on of Peripneumony, the Pain of
the Side ceases, which may happen, when
the infarction of the Lungs is so great, that
little Blood passes from the right Ventricle

of the Heart to the left, and the Aorta
is not half supplied with Blood. So
that the Powers of Nature sinking for
want of it, all tends to an universal
Stagnation, and the Patients become
as it were insensible, or as Aretaeus
says, Complain of Nothing, though
their Pulse intermits, and their Extremities
are cold. I have seen several such
instances - "About four years since
one William a Sailor, was seized
with a Complaint Paraplegia about
the ninth day of a Pleuro-Pneumonia
and about 24 Hours before his Death.
It is a fatal Symptom therefore when
the Pleuritic Pain suddenly ceases, and
the Difficulty of Breathing and Load at Breast
still continue or increase. -

-And the following Aphorism is
most certainly true "A Peripneumony
supervening a Pleurisy is dangerous."

The Inflammation of the Pleura may
be diffused from one part to another as
to that part which immediately covers the
Lungs. The mediastinum is but a Duplication
of the Pleura and an inflammation
may attack any part of it, or be pro-
-pagated to it. in which Case very acute
Pains are felt under the Sternum or between
the Shoulder blades, this we sometimes
meet with and is generally attended
with great Danger. - Both, Hippocrates
and Aretaeus take Notice of a Dorsal
Pleurisy; in which the Pain shoots from
the Spine to the Breast Bone attended with

Orthopnea, cough, and a very difficult
and small expectoration. — Sometimes
the Pain is forward and directly under
the Sternum where the Mediastinum
is attached to it and in consequence
of it Apertures have been found in
that Part. — When the Pain seems to
lie very deep in the Chest, with a
great Sore and Anxiety, Palpitation
of the Heart, and a constant inclination
as it were to raise a cough, the Pericardium
(the external membrane of which is also
from the Pleura) is commonly inflamed. —
When the Pain is spread all over the Breast
with a great Oppression, and perpetually
darting pricking pains here and there — not
only the Mediastinum but the external

Membrane of both Lobes of the Lungs ~~is~~
to be inflamed. The great difficulty of
Breath, Load and anxiety, perpetual
cough, and constant desire of sitting
up erect, shew this to be the Case; and
a very dangerous one it is as well as an
inflammation of the Pericardium

4^{thly} The upper Membrane of the Diaphragm
is likewise from the Pleura, and may
either primarily inflamed, or secondarily
from the inflammation of the Pleura,
and this certainly happens more commonly
than is imagined. - This is called a Parax-
= phrenitis, and is attended with a very
acute Fever and a very violent pain
extended from the lower Ribs to the
lowest Vertebra of the back, a short

Convulsive spasmodic kind of breathing
A vast anxiety and uneasiness, dry
Cough, Hiccups and Delirium. and
excessive Pain is particularly felt on every
inspiration, which darts itself from the
Sit of the Stomach to the very Loins.
The hypochoandrium of the Side affected is drawn
inwards, and upwards, under the Ribs, and
the Abdomen is scarcely perceptibly moved in
Respiration, but remains fixed and
Convulsed as it were by the Violence of
the Pain, in attempting an Inspiration.
A Pleurisy or Pleurisy may be
generated by an inflammation of the
intercostal Muscles or Pericostum of the
Ribs. Indeed in these Cases the pleurisy
symptoms may not immediately come on

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nor commonly do they till after two, three,
or four days. - but as the inflammatory
Pain hinders a due Expansion of the
Thorax, and a sufficient inflation of the
Lungs, they at length also may become
greatly affected. - In such Cases it
is necessary to Treat early to lay
and Repeated Bleeding, Nitrous Medicine
℞ - Fomentations, Opiates &c. - In
a word we should treat the Case as a
mere inflammation of the Membranes
Muscles, or Periosteum; But, when a
Cough at Breast, Cough, Expectoration
℞ - come on we must have a regard
to these also, as well as to the pain
of the Side &c. -

The Distinction of Pleurois into true and
bastard hath a real foundation in Nature
and is of some import in practice; for
when the intercostal muscles only are in-
flamed, much more is to be expected
from topical applications, Blisters, Cupping,
and the like, than when the Pain of the
Side is from an inflammation of
the Pleura or external Membrane
of the Lungs. - The soreness to the touch
the Pain on lying on the affected Side
and chiefly on a full inspiration.
The Tumor and Redness of the part
which sometimes appear, testify much
this from the internal Pleurisy.
Beside there are some persons of the
Side, and those too pretty severe, which

arise from a sharp acrid Defluxion on
the Muscles of the Breast and the periosteum
of the Ribs; and which must sooner
give way to topical Applications,
edulcorant Medicines and prof. ~~sp~~ ^{sp}urges
them to Bleeding, which in such Cases
is no further Necessary, than to take off
a Plethora, if it subsists. Indeed when
an acrimonious Humor is the Cause
you may bleed and bleed on to very
little purpose, but that of weakening
your Patient. Will Bleeding cure ~~scorbutic~~
scorbutic or Venereal Pains? It may as
well remove the Pain from a Rotten
Tooth, or a Thorn in the Flesh.
The anesthetics well distinguished between

rheumatic, or flatulent Pains about
the Breast and Side, and the truly
pleuritic, Hippocrates justly files
them, Αλγυπια is ΧΥΩΣ ΕΣΗΚΟΤΑ
αοηπα, and forbids bleeding in them.
These they attempted to Cure by hæmorrh-
agations, Purgings &c. and not by
Bleeding; whereas the fixed, συστροφικὴ
Ἰνφλαμμάτιον inflammation
of the Breast as the Commentators.
Call it always Requires Bleeding.
Pains in the Side attended with
Πυθολογικὴ frequently require nothing
than more than Clysters or gentle laxatives
to perform a cure. — Bleeding in such
Cases generally increase the Pain and
flatulency —

But in all these cases the Pulse, Degree
 of Fever, the Tongue, Situation of the
 Pain and manner of Breathing, pretty
 clearly discover to the judicious Practitioner
 what is the Matter and what is to be done
 — When the Pain of the Thorax is violent,
 the Pulse hard, tense and quick, the Fever
 high: the Pains may be pronounced
 pleuritic, especially when a Rigor
 preceded — True pleuritic Disorders almost
 always begin with a Rigor and the Pulse
 is very hard and tense like the Vibrations
 of a Cord — The Pains are very sharp,
 sticking and fixed, not tensive and shifting
 as the flatulent. — nor uncertain, wide
 and wandering, as the Rheumatic. —

The Hardness of the pulse is one of the most pathognomonic Signs of an Inflammation of membranous Parts; which therefore pains lie under the Sternum or shoot from the Spine to the Breast Bone, you may guess the mediastinum is inflamed, by the tension of the Pulse.

Cures of Pleurisy

Bleeding according which must be regulated in the Quantity - according to the Strength of the Patient, Pulse and fever the Violence of the Pain and Difficulty of Breathing - The Quality of the Blood should also be particularly inspected for a dense fiery blood not only indicates an abundant quantity of the Red Globules but likewise its inflammatory disposition

and that the Patient if need be, can well
bear large and repeated Bleeding. —

An Emollient Cooling Clyster should
immediately succeed Bleeding.

After this the pained part should be
fomented with a Decoct. de. Lin.

Tenuic. Flor. Cham. in Milk and
Water. — This was the ancient Practice.

He prefers humid fomentations to the
dry and hot. After which he applies
he applies an anodyne Plaster —

Opium ℥i.

Campbor ℥i. — Conf. Opium

After due fomentations, with very good success.
but always first try the humid Folus.

Nitrous medicines — Thin whey — Barley
Water — a Decoct. of R barley and ʒss Populus.
he uses Olie. Paregor: early in the
Dysuria to mitigate pain

in the painful urine.

Supposing that the Benefit derived in this
way more than counterbalances then its
Effects in increasing the inflammation.
he considers pain a stimulus which
greatly quickens the circulation, and
derives likewise more than natural to
the pained part - When a sharp Cough
attends it should be mitigated by
Diacordium or the like - else the
great Agitation, it causes will also
increase the inflammation. They however
demand some degree of Caution and
Prudence in the use of them - therefore
ever remember, before you administer
them, the Lancet is not to be sparingly
used, when the Pain is very violent
the pulse very hard, quick and tense, and
the Fever high. —

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He says - About 4 years since a strong
Philthoric Gentleman, about forty, was seized
with a fever and violent Pain of his side
He was immediately bled to 16 or 18
Ounces - This abated the Pain - He got
up, sat by the fire in a smoky Chamber
drank near a Quart of Cold Beer, fell
into a vast Rigor, succeeded by a high
fever, excessive pain of his Side and
Breast, great difficulty of Breathing
Deliriums and the most incessant
terrible Cough & even haemorrhoids
pumped up great quantities of fresh frothy
Blood - I was obliged to bleed him
three times in 24 hours and to give him
seven grains of Solid Laudanum

besides 2 or 3 ounces of Diacodum in
that short space of time - And this, and
this only / (for he would take no other
Medicum) happily recovered him -

This indeed is a very extraordinary
instance - but the Method which is
above recommended, I have in a
Multitude of Cases experienced to
be very safe and effectual. In
several Epidemic Pleuritis, I have
known very sweating, especially after
the third or 4th Day of very great Advantage
and with this View, have often added
Camphire to the Mixture which joined
with small Doses of Elis. Purg. out
A thin warm way, Ptesan, seldom
or never fails of answering the intention

In general we find they sustain the loss
of Blood with much better Effect and
less inconvenience in a cold dry Spring
than in a Wet Summer, or a Raining
Autumn — May there are some Pleuritis
at least vulgarly so called, that will
admit of little or no Bleeding — in
which the pain of the side seems a more
Symptom, not the Disease; —

Alepiades observes that the People of Rome
and Athens did not bear bleeding in
Pleuritis and Peripneumonies as well
as those about the Hellespont; the former
lying to the South, and in a much more warm
and moist Air than the latter, who were
much exposed to Cold dry northerly and
Easterly Winds —

without all Doubt the very Constitution of
the Solids and fluids differs Considerably
according to the different Situation of
the inhabitants. — Upon the whole then let
me add this Corollary, that in practice
we not only ought to consider the
peculiar Nature of the Epidemic, but
also of the season, and the Constitution
of the Patients. — Speaking of the
use of opiates he says — "The Violence of
pain unquestionably demands the use of
Opiates, after Bleeding, which prudently
interposed are certainly of exceeding great
service."

A Method for preserving the Health
of Seamen in long Cruises and Voyages.

It is found that the Officer who carries
some Cydon fruit & Camellia leaves to
prevent scurvy — He recommends
giving the Crew in Cider, good sound
a pint a day — besides Beer and Water.
Vinegar & Water &c. In Case of
Sinking Water, Juice of Lemon
Elixir of Vitriol should always be
Mixed with it. — The Roman Soldiers
drank Posca viz Vinegar & Water.

A Dissertation
on the
Malignant Ulcerous Sore-
Throat. —

In the Year 1752 he mentions an Epidemic
Febris Anginosa, which raged up and down
with great Violence attended with febrile
or pustular Eruptions, and succeeded with
great itching and Desquamation of the Cuticle.
In this the pulse was commonly hard, quick and
small, the breathing hot and laboured, with
great Oppression on the Praecordia, the Urine
sometimes crude and pale, sometimes high-colored
and turbid, but without sediment; and
generally Delirium generally came on soon.
The sick commonly bore Breeding at the beginning

with advantage, and the Blood, was after this
much less in general than in Quinries of
the truly inflammatory kind. — they very
seldom however admitted of large Bleeding,
feared indeed of a second. — In all sorts of
fevers there was a subsiding Disposition to Eruptions
of some kind or other, to Sweats, soreness of
Throat and Aphthae. —

He then proceeds to give an account of this
Malignant ulcerous sore throat as it appeared
in 1752.

The attack of this Disease was very different
in different persons. — Sometimes a Rigor, with
some fulness and soreness of the Throat, and
painful stiffness of the Neck, were the first
Symptoms complained of — sometimes alternate
Chills, and Heats, with some degree of Head-ach,
Giddiness or Drowsiness, ushered in the Disorder

it seized others with much more feverish
Symptoms great pain of the head, Back,
and Limbs, a vast oppression of the Praecordia
and continual sighing. - Some grown persons
on the contrary, moved about for a day, or
two neither sick or well, as it were, but
under uneasiness and anxiety till they
were obliged to lie for it - But it commonly
began with Chills and Heats, Load and Pain
of the Head, Lowness of Throat and Hoarseness,
some Cough, Sickneſs at Stomach, frequent
Vomiting and Purging, in Children especially;
which were sometimes very severe; though
a contrary State was more common
to the adult. - There was in all a very great
Depression of Spirits, very sudden weakness, great
heaviness on the Breast and faintness, from
the Beginning. - The Pulse in general was quick

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Small and fluttering, though sometimes heavy
and undesc.— The Urine commonly pale,
thin, and crude, however in many ground
Persons in small quantities, and high Colored,
or like turbid Whey.— The Eyes were heavy,
Reddish, and as it were weeping.— The
Countenance very often full, flushed and
bloated, tho sometimes pale and sunk.
at Night the Symptoms became greatly
aggravated, and the feverish Habit very
much increased, nay, sometimes ~~as~~ a Delirium
came on the very first Night;— and this
Exacerbation constantly returned in the
Evening through the whole Course of the
Disease.— Some few Hours after the seizure
and sometimes contemporary with it, a

Swelling and Lumps of the Throat was
perceived, and the Tonsils became very tender
and inflamed, and many times the parotid
and maxillary Glands swelled very much
and very suddenly, even at the very beginning,
sometimes so much so as to even threaten
Strangulation. The Fauces also very soon
appeared of a high florid red or rather
of a bright Crimson colour, very
shining and Glossy; and most commonly
on the Uvula, Tonsils, Velum Pala-
-tinum, and back part of the Pharynx
Several whitish, or Ash-Coloured Spots
appeared scattered up and down - which
sometimes increased very fast, and soon
covered one, or both the Tonsils; Uvula &c.

There in event proved the Sloughs of superficial
Ulcers (which sometimes however eat very
deep in the parts) The Tongue at this time
the only white and moist at the top was
very foul ~~in~~ the Throat and covered with a
thick yellowish, or brown Coat - The Breasts
now became very tender. The 2 or 3 Day
every Symptom became more aggravated
and the fever more considerable - The
Restlessness and anxiety increased as well
as the Difficulty in Swallowing - The
Head was very giddy, pained and loaded
and generally more or less Dilectum
sometimes a Vomiting & Diarrhoea was
urgent especially in Children - The Sloughs
were now much enlarged and of a dark

in the mouth & throat.

Color and the surrounding parts tended
much more to a livid hue - The Breathing
became more difficult with a kind of
Tatling Heute express^d the Noise such
snake as are struggling with a foe - and
the shrill barking Noise as in infant
Quincey. The Nostils become in some
inflamed and excoriated and great
discharges took place - which being sometimes
swallowed occasioned excoriation of
the intestines. Violent Gurgings, Argenting
&c - The Windpipe was sometimes excoriated
and some of its internal membrane coughed
up - sometimes the Angina came on
before the Exanthemata, but many times
the Cuticular Eruption appeared before the sore throat.

The Effluence commonly appeared about
 the 2^d, 3^d or 4th Day - Sometimes Erysipelas
 sometimes pruritic - An early Eruption
 was commonly a good omen when attended
 with a Disquamation of the Cuticle.
 but when the Eruptⁿ turned of a livid
 hue the utmost Danger impended -
 The Disease was generally at its height
 about the 5th or 6th Day - and the Crisis
 many times was not till the 11th or 12th
 If a gentle easy sweat came on the 3^d or 4th
 Day, if the Pulse became more flow
 firm and equal, if the Stomach cast off
 kindly and appeared at the Bottom
 tolerably clean; and pined - if the breathing

was soft and free and some sense of vigor
and emulsion returned to the Eyes; all
was well. and a salutary Crisis soon
followed - but if a Riga came on
and the Exanthemata suddenly disappeared
or turned livid - bad sign - It was necessary
to pay particular attention to symptoms
in order to decide as to the propriety of
bleeding, purging &c - When the pulse
was small, quick, and equal fluttering
Pulse at the attack of this Malignant
Quinsey, tho' indeed it sometimes was
full and undeviating but even then heavy
and unequal - to the fatal diagnosis of
Spunk and Shingon - Profuse Anxiety

Lighting and great Effusion on the Procardia
heavy, dull, watery and as it went :
weeping Eye, pale nose, thin Urine
tho often turned like Whey - to the
whitish least commonly moist Tongue
tho considerably furrowed near the Root -
to the Shining Crimson Color of the
fauces, with interspersed white, or
ash Colored Spots or Blotches, with
a Nauseous and sometimes very
Acrid Breath - To the scarlet or
Crimson Efflorescence in some ex-
=clatons in other pustular / on the Hands
Arms, Neck, Breast &c - Symptoms
that attend this Disease - He allows
that some Bleeding may be proper

at the very beginning of this Disease
in some plethoric Adult Persons, some
Blood may be drawn at the very beginning
of this Disease, but a repetition was
generally injurious

Cure

Instead of Bleeding I generally ~~prescribe~~
~~or rather ordered~~ with a Clyster of Milk, Sugar and
Salt to be injected to unload the
intestines, especially if the Patient was
Costive; but when a Purgine attends
the Attack, a few Grains of torrefied
Rhubarb with Spec^s & Scordio, Decoct.
Alb. &c are proper. And if a Diarrhea
is supposed, a Spoonful or two of Decoct.
Tracastorei Fulleri may be frequently

given which is in such Cases, a
 very efficacious Medicine. If Nausea
 & Vomiting were urgent, I ordered a
 gentle Emetic particularly Adults—
 & Children with a Lib. of Oxy-mel
 Scillit. & S. of Antimony—in order to
 remove the vast Mass of tenacious mucus.
 I then immediately put the Patient on
 a saline Mixture of Sutt of Wormwood
 or Sol. Sac. C. C. and Juice of Lemon
 with Ag. Alexit. Simul. to which was
 added a small Quantity of Myrrh and
 Saffron; & these last were given in
 a bolus with a few grains of Nitre
 if the fever ran pretty high—the addition

also of a grain or two of Camphor was
very useful for the Adults when the
Stomach would bear it; when it
would not, I used Juleps e Campho
or Acetum Camphoratum with Syrup
of black Currants, Raspberries or the like.
The second or third Day to the saline
Mixture, or a temperate Cordius Julep,
I added some of my Fruit. Cut. P.
Alexipharmac: which, at the time of
the Disease, I found greatly prefer-
=able to the Bark in substance
as it much more tends to promote
the Eruption of the Eruption,
and does not by far so much linger

the coming on of Sweats, which at all
times of this Distemper are of the high-
=est service, provided they are gentle,
Uniform, and Universal - Indeed
it was with great difficulty the
Sick could be brought to sweat
at all, but whenever moderate, equal,
diffused sweats came on the 3rd, 4th or
5th Day, or even later, they were critical
and salutary, the Urine grew
immediately more concocted and
further deponed a very large Quan-
=tity of Clay colored or pale latent
Sediment the before Crude, thin, or
limpid - I commonly gave Elixir
Vituli with the Tricture of the Bark

except to very young children which
is an excellent Antiputrescent
Alexipharmaca and I frequently
ordered the Elixir to be taken out
of an Infusion of a Rasted Seville
- Orange in Claret, or Red Port Wine
and Water - which is a very pleasant
and not an ineffectual Composition.

The Gargle I commonly used was
a Decoct. of Tigs, Red Rose leaves,
Myrrh & Honey in Tough Cider,
and a thin Mucilage of Juniper seeds
with Syrup of Raspberries, or black Curr-
-rants; and a little Tincture of Myrrh,
per se, and Spirit of Vitriol, was to be
taken by Spoonfuls every now and then.
especially after Spitting.

and I also directed the Tumes of Red
 Rose leaves; Chamomile flowers,
 Myrrh and Camphire boiled in Vinegar
 to be drawn in with the Breath very
 often, as hot the Patient could well
 bear it, which gave our great and
 speedy Relief. —

Tho the swelling of the Neck, parotid
 Glands &c. would sometimes
 come on so sudden, great and
 Violent, as to endanger a Suffocation;
 yet in general I took this external
 Tumor to be partly critical and therefore
 endeavored to promote it by Acid Cataplasms
Blister &c. nay I have several times
 blistered the Throat from Ear to Ear
 with great Success.

These Applications are useful in common
Quinsys; much more so in this
when the Humors were so exceeding
Sharp and Malignant. Indeed if

If the Abdomen was very tense, and
the Patient costive; about the 5th
or 6th Day I generally gave a Dose
of Rhubarb Manna or Lenitive
Electuary - and after that commonly
the Bark in substance - but I never
so ordered it when the Belly was very
tense and constipated, nor until
some Signs of Coction or a beginning
desquamation of the Cuticle appeared.
For I formed my Frictions, or a Decoction
of the Bark, as useful as well, nay

lether, as causing much less Effusion
On the Breast. - I now also used a
Kind of Resin of the Bark, made
with Spirit of Wine, which I much
prefer to the Common Extract, as it
sits much lighter on the Stomach,
and keeps much better; and therefore
I think it more proper for an Official
Medicine. However improper Purgings
might be at the beginning of this Distemper
gentle easy Cathartics as Rhubarb
Manna &c were necessary at the
end to carry off the putrid Collicies
of the intestines, which otherwise
protracted the feverish heats and
occasional great Weakness, Want of
Appetite, turned Palsies, and great

Distinctions of the Glands; nay I was
often obliged to give Repeated Doses
of Calomel to carry off the Swellings
of the Parotid and Maxillary Glands
which otherwise frequently remained
a long time much swollen and indurated
and at length sometimes suppurated.—
Indeed I found it necessary several
times to rub them with a Mercurial
Ointment before I could dissolve
the Swimmors. Many however required
frequent Purges, a Continuance of
the Bark & Whet's Mineral &c for
a considerable time, and then a Course
of Open Milk and an Open Country
Air—

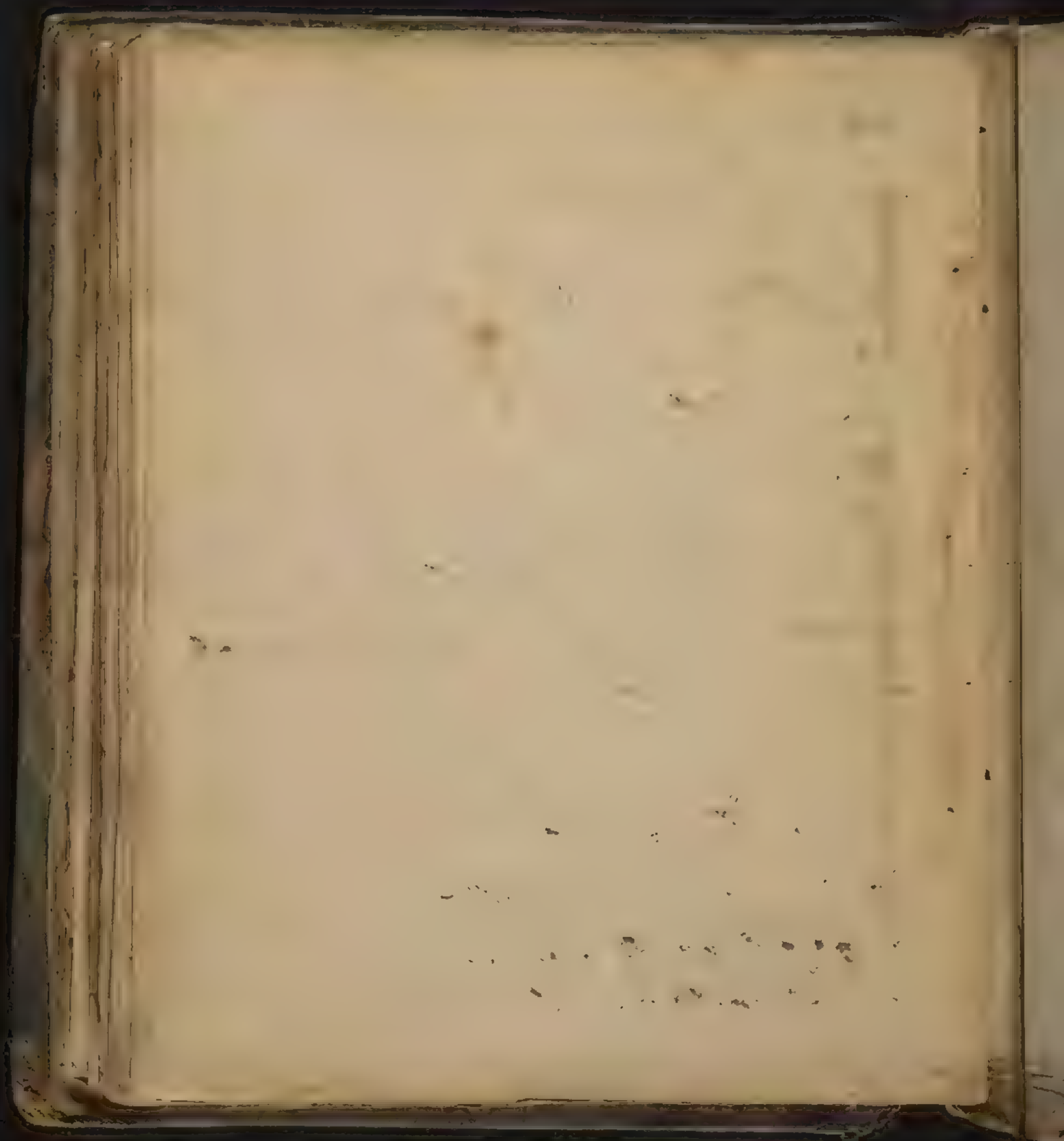
The Word Fever, as promiscuously used
 in the Practice of Phys^y; is not a
 little Vague and undetermined.—
 There are some Disorders that pass
 under that general Name, which
 are best cured even by raising the
 fever, to instance only in some
 Quarten Agues and low nervous
 Fevers.— And the Malignant Quinze
 here described, is another Species of
 fever, which evidently proves that
 all acute Diseases are not to be
 treated merely with Evacuations,
 and cooling Medicines.— Proper
 dilution is unquestionably useful
 in all fevers but certainly some

Require more than Bon Ay Water and
Lemonade.

I shall add a word or two on the
use of Vol. alk. salts in fevers of
the pestilential or puerperal kind
in which I fear they are too often
very improperly administered.

In all fevers of this nature the
Blood is always found too much
broken and dissolved, and at length
becomes highly acrimonious
and as it were formless and putrid
Whatever tends to promote this
acrimony and dissolution as
injection and the Vol. alk. salts
do this in an eminent Degree.

Broken and Dissolved Globules
are very apt to enter into the Arteries
and Lymphatic Arteries, and there
not finding a free passage thro' their
complications stagnate & corrupt
and at length even corrode these
exceeding tender Vessels - particularly
when saturated with acrimonious
Salts - which at the same time greatly
irritate these very minute Canals
encrease the Heat, and so cause or
more speedy corruption both of the
Humors and Vessels; and when the
putrid Lymph and Serum and
is absorbed into the Mass of Blood
it greatly hastens the general Corruption



(1)

Taken from *Chisholm*
Ulcus
and *Fever*—

Indications of Use

1. To discharge from the stomach and intestines acid and offensive humors.
2. To abate inflammatory diathesis without producing a tendency to putrescence.—
3. To moderate the tendency to putrescence and to abate it when actually present.
4. To restore Tone and Energy to the System.

1st Ind. answered by taking One and a half ounces of Salt and Two grains of the tartaric antimony dissolved in a pound and a half of pure cold water a large wine glass full was given to the patient

in the animal system.

every hour until a sufficient effect was
produced. Till the whole of the quantity
was taken. The two first wine glassfulls
generally operated as an Emetic and fur-
evacuated the Stomach, the medicine after
this acted on the intestines and excited
a copious discharge of their contents -

If at the same time a diarrhoea
broke out / and it almost always did /
the Patient found himself considerably
relieved - I have sometimes however dreaded
the consequences of copious evacuation by
I too contented myself with an Emetic alone
composed of from ten to thirty grains
of Ipecac: and one or two of tartarised
Antimony - The sometimes used the bitter
Purgers, Salts and found the Addition of

Lime juice and Sugar rendered the Solution
much more agreeable -

2 Indica: fulfilled by giving doses of Nitric
Camph: & Sassa. Smat: with occasional
Small doses of Laudanum to produce
diaphoresis - sometimes used the Saline
Draughts of Rivinus with the same intention
persuasion in the above plan sometimes used
the Slighter cases - the skin being covered
with ^{an agreeable} Moisture he commenced the exhibition
of the Bark to procure tendency to pers-
piration also warm and nourishing food.
Finding however all the antiphlogistics totally
ineffectual and that Bleeding was on no account
admissible I had recourse to the only Remedy
left me, Mercury. he exhibited the Mercury
in ^a pills generally composed of five grains
Calomel two grains of the Antimonial powder.

In the initial system.

and one of Opium - and repeated four times
in twelve hours or eight times in the twenty
four hours. If Salivation was ^{speedily} raised the
danger was removed and the Patient recovered.
In several instances he pushed the mercury
to an almost incredible degree with a most
= striking success - in one instance signs of
recovery did not appear till the 21st day
fully 400 grains were given before the
salivary glands were affected, - in
order to effect a salivation it was frequently
necessary to increase the quantity and number
of Doses - In every case wherein salivation
took place, little further was required than
the continued use of nourishing ~~and~~ simple
food and wine - But when the mercury had
not this effect or when its action was so tardy
as to give harm for the most serious application
of the issue it was necessary to have recourse

to the Patient. In medical history, and records of the
 Homoeopath. Ether was the only Medicine that
 was in any degree truly and permanently
 beneficial in enabling the Stomach to
 receive and retain the Pure. Matter.
 Many Cases fully convinced this, and a few
 occurred in our practice, wherein the cure
 was completed by this Medicine alone. —
 I gave the Ether in the following manner
 the Patient being allowed to remain undisturbed
 about an hour, I gave him about a tea-spoon
 full in about half a wine glass full of Cool
 Water. — After this he continued undisturbed about
 two hours when the dose was repeated —
 at the expiration of another hour, the food was
 offered him; and if he swallowed and retained
 it, the Ether afterwards was given only once
 in five or six hours. — But as this rarely
 happened, it was generally necessary to repeat
 the Ether in the same quantity every three

In the animal system

soon till the Spasms of the Stomach was
entirely overcome. Opium given in this manner
I have mentioned is extremely grateful - it
occasions an agreeable warmth along the
Oesophagus, and gently stimulates the
Stomach - This Effect however does not
continue long; but the frequent production
of it at length gives it permanency - it
appears to act as a tonic, an antiseptic, and
an agreeable stimulant - a warm glow overspreads
the Surface, and thus, Nausea and obstruction
often have been before it - I have generally
during the exhibition of the Opium and till
the Stomach became retentive ordered Opium
to be administered in the form of injection
which were exhibited in the following
manner I generally added two tea-spoons
full of a strong watery Solution of Opium
to an injection composed of an ounce and a
half of the Bark and eight or ten ounces
of water moderately warm^{ed} of Chicken

on Feb 1. - The injection was repeated
day and night every three hours; and
if union. Retained a constant injection
was administered. The 26 hours to carry
to the recommended Bark with a view
to overcome the Spasm by distension. I had
a pint and a half of the above mixture
injected into the ^{and} ~~urine~~ with one degree
of violence ~~when~~ applied a compress to the
anus by means of a towel well soaked
into the ~~urine~~ the pipe of the Syringe was
withdrawn. Singultus is most effectually
relieved by holding a quantity of Cold
water in the Oesophagus for a minute or
thirty seconds. To two ounces of bark
he added as much Port wine as rendered
the mixture ^{to pass thro' the Syringe} ~~substant~~ thin and wat' the
usual dose of solution of Gum and
administered every three hours.

In the evening 1st m.

He used the Argemone fruit, & gave
the lay! a Qi of 1/2 lb. of Borel mixed
with water every hour, or Qi in three
hours - To restore tone in convalescence
Change of apartment & Exercise &
Use of generous wine &c -

In a case of incipient Phthisis. R. gave the
following directions viz. To be bled to the
quantity of 8 ounces once a week - to take
from 20 to 40 drops of Laudanum night
and morning - And to take of the Qi
Vill. three times a day - morning, noon and
night in the quantity of from 3 to 4 drops -
to live upon a diet nutritious and - as
rice &c. Roasted Potatoes - Roasted Apples
Eggs &c. &c. The Patient was cured.

Receipt for the Cure of impotent
Pain in

It will be proper to take eight
or ten ounces of Blood immediately
and repeat the dose of the same quantity
only once a week until you are
relieved. If not relieved by a
second Bleeding, apply a Blister to
your Side or Breast as near as possible
to the Spot where you are usually
in pain.

Take at the same time
a pint or three of the Elixir
of Sarsaparilla three times a day in
of any kind and drink freely of
Raspberries, tea, or Barley water made
warm. By the addition of
Sugar and lemon juice, or of
Cinnamon or nutmeg as a

In the initial system.

little honey.

give during the day.

Remedies for mild Typhoid
food with a little milk. Rice porridge
in equal parts of Milk & Water.
Roasted Apples, baked peaches.

dumplings made with rice or a little
cannelloni of equal parts of wheat flour
& boiled potatoes, Roasted Potatoes.
Roasted or Boiled Apples, weak Tea

Coffee. Weak Chocolate, with now
and then a few hot Roasted Oysters,
fresh minced fish, a soft white egg, a
little weak chicken broth, - the wing, or
breast of a boiled chicken - a little salted
meat or salted fish will be the articles
of diet most proper. Mix them a
little, popular in your stomach, and
eat a small quantity of them at a time
so as to make her or his dinner meal instead

of two or three in a day - a little weak porter and
warm man in taken with them.

Take from 5 to 45 drops Laudanum every
evening at 10 o'clock in winter somewhere ~~where~~ to
the couch at night, and take from 10 to 20
every morning as soon as you wake in order
to compose your couch during the day time.

Wear flannels next to your skin in cool
and cold weather. - Protect your feet with
great care from the cold. Eat, drink, sit
constantly, and sleep in a stove room in
which great pains should be taken to
preserve a moderate and uniform temperature
of air both day and night. -

Avoid going out of your house before
8 or 9 o'clock in the morning, and after
5 or 6 o'clock in the afternoon - Also in
damp and very cold weather. Avoid loud
and long speaking Reading and singing.
Also fatigue from all it, causes heat of
body and mind. Use your exercise in
dry and moderate. - You should be
able to run, swim, sail or go to the garden.
You may come your three weeks, but
remain established and permanent
in the animal system.

Come to give a witness
of your health to the
tree.

It is the time is over for
growth and activity each of the
Medicines.

1. From 5 to 10 grains of Iodine made into
syrup with sugar, three times a day.

2. I have had a cup of a half, and
of the Brandy or Spirit or any kind
in which an ounce of iodine is
dissolved in water.

Keep a few ounces of iodine at any
time, for now or perhaps years to
come, whenever your health is un-
usually low or when you feel
an unusual pain or pressure in your
throat, or when your mind is unusual,
take a cure.

Keep the iodine ready at hand by any
kind of medicine.

Of Pathology,

Pathology is that part of Medicine which treats of the various morbid states of the human body; - or, it delivers the general doctrine of Diseases. —

Every affection of the human body, which produces changes, or appearances, different from a state of health may be called a disease, or a Morbid state. —

— Diseases in general.

In the general doctrine of diseases, four things are necessary to be considered, 1st The definition of diseases, 2^d The causes of diseases, 3^d The symptoms of diseases, and 4th The differences of diseases.

First then, — a Disease is a physical affection arising from a determinate cause operating by certain established and permanent laws in the animal system.

second, The cause of a disease is whatever
^{such a change}
induces in the body as constitutes the Disease.

And that part of Pathology which treats of
the causes of diseases is called etiology.

The causes of diseases are either proximate
or remote. — The proximate cause is that
which immediately constitutes the disease;
therefore sometimes called the material, or
causing cause of the Disease. —

The remote causes are hereditary; acquir-
ed guminal, or Predisposing, and Locative
tic or Occasional; these are sometimes called
antecedent causes. —

— Thirdly, that part of Pathology which
treats of the symptoms of Diseases is called
semiotics. — The symptoms of diseases
are either essential, or accidental. — The
essential symptoms, called also Pathognomonic

Symptoms are those constant symptoms in a Disease which designate its nature. Thus a cough, acute fever, pungent pain of the side, and torridous breathing are Essential Symptoms of a Pleurisy. — Accidental Symptoms are such as may be either present or absent, without altering the nature of the Disease, as vomiting and diarrhoea in a pleurisy. — Symptoms are either constant and permanent, continuing thro' the whole course of the Disease, as a fever in a pleurisy, or, they are supervening or epigenominal happening at different periods of the disease, as the eruption of pustules &c. in the small Pox. —

The Symptoms of Diseases are also Diagnostic, Prognostic, & Anamnestic, — Diagnostic, when they point out a Disease present; Prognostic, when they predict the future consequences of a Disease.

Anamnestic, when he indicates a pre-
ceding disease, as putting after the in-
flux. — The progress of a disease is generally
marked by stages, as the beginning, increase
height or climax, and decrease. —

Fourthly and lastly. The difference
observable in diseases are of various kinds.
Diseases that run very quickly through their
several stages are called acute or short;
those that run slowly through them, are
called chronic, long, or slow diseases. —

Some Diseases are universal, affecting
the whole system, — others are local
affecting only a particular part. —

Some diseases are continuous, some remitt-
ing, and others intermitting. —

Remitting and intermitting diseases
are called periodical, — they are either regular or

The Order of return of periodical diseases is called its Type. — The return is called the Paroxysm or accesion; — The Interval, Inter-~~mission~~, Intermission, or Remission, —

Diseases are either original and Idiopathic, or they are secondary and Sympathetic.

Diseases are called either Seasonal or Autumnal with respect to the season of the Year —

They are likewise Sporadic, or Epidemic, Pandemic. — Pandemic diseases are either

Epidemic or Endemic. —

— Of the particular morbid affections.

These are best treated of in the order of Dr

Cullen's Physic. — as follows —

1. Of the Diseases of the Simple Solids.
2. Of the Diseases of the Living Solid.
3. Of the Diseases of the Vital Organs, and in the motion of the Fluids —

- 4th Of the Diseases of the Natural function, and
of the fluids themselves. — }
5th Of the Diseases of the Organs of Sense.
6th Of the Diseases of the Organs of Motion, &
7th Of the Diseases of the Functions peculiar to the several parts.
1st Simple Solids.

Debility. — Rigidity. — Cracility. —

2^d Living Solids.

Irregularity. — Torpor. — Energy. Atonia.
Vessels. Dilatation. — Obstruction. Rupture. — Aneurysm. — Varix. — Hemorrhage. —

Organs. Inflammation. Solution. Scattered.
Aberration. —

3^d Vital Organs &c.

1st Lungs. Stopped Respiration. Cough. — Stridulation.
Yawning. — Panderulation.

2^d Heart. Palpitation. Syncope. —

3. Motion of the fluids. Excess. Defect. Irregular. —

4. Natural Functions & fluids.

Anorexia. Dyspepsia. Bulimia. Vomiting.

Cholera. Diarrhoea. Constipation. — Diabetes.

Strangury. Dysuria. Ichuria. — Epiduria.

Aphoresis. —

Of the fluids, In y. Perna va. Cocochylia. —

In the Blood — quantity — quality. Plethora.

Obesity. Inanition. Leanness. — Lentor.

Tenuity. Animony. Vitiation of the Chyle,

blood, secreted fluids and Excretions —

2 ammandum est i. iii. - inter alia.

Commersonia *peruviana*
indica

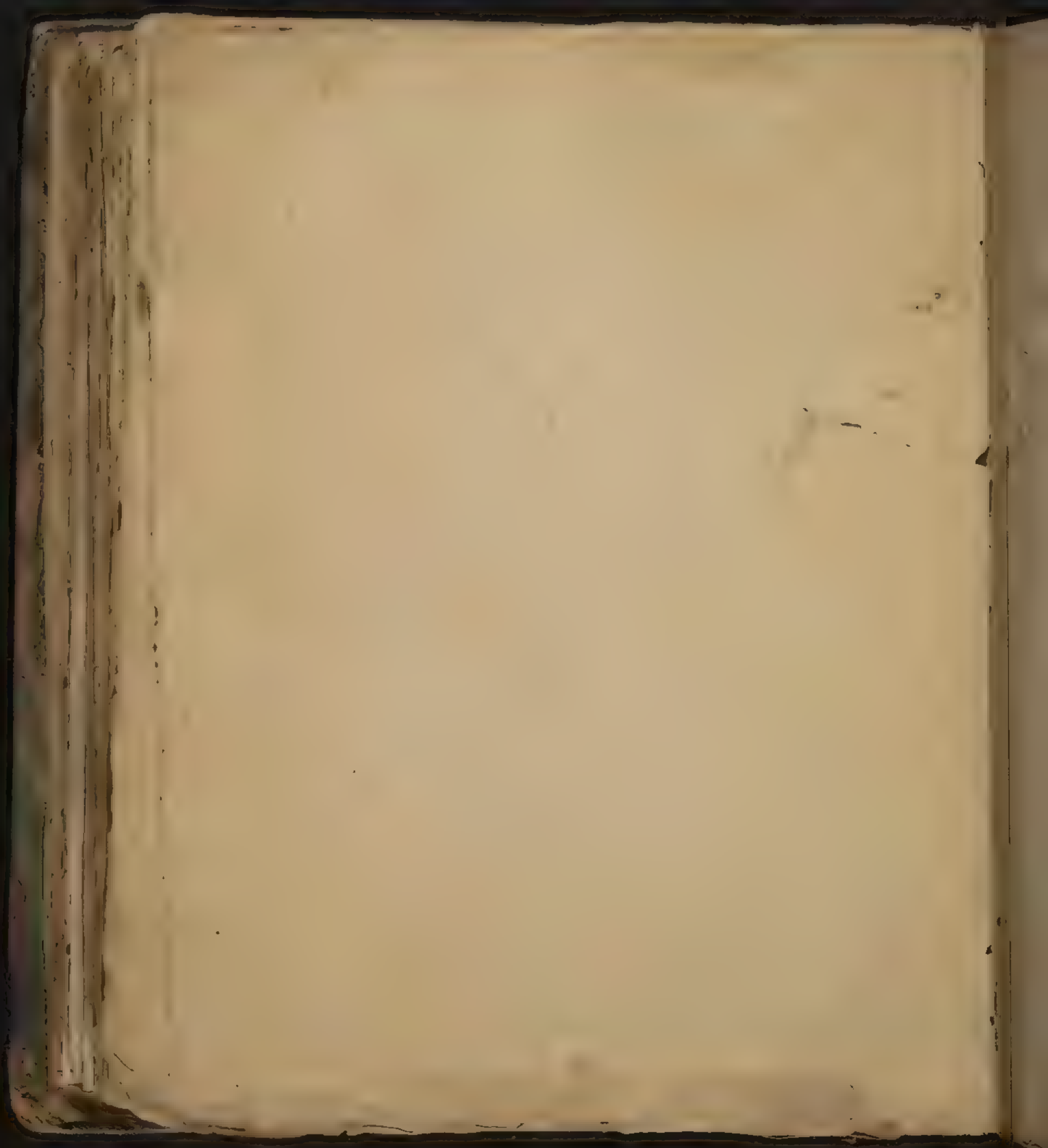
Linnæan Society - London

Equally to & know, this is a very tall
influence the opinions of the day, with a few obser-
vations on the chemical principles of bodies. —

By chemical principles of bodies, I mean
the elementary particles of matter, which constitute
the first of all objects of Chemistry; or those
simplest parts into which all bodies, by chemi-
cal analysis, may be ultimately decomposed; and
by various combination of which, all the changes
and alterations of bodies, produced by Chemistry, are
effected. —

These principles have been variously enume-
rated; according to the different hypotheses of Chemi-
cal writers, and the degrees of improvement, that
from time to time have been made in this branch
of knowledge. —

Chemistry has a very useful and im-
portant branch of Natural Philosophy, and
it is in great improvement, under very lately it
has not half a century since it first began to
take its present form, or since any attempt was



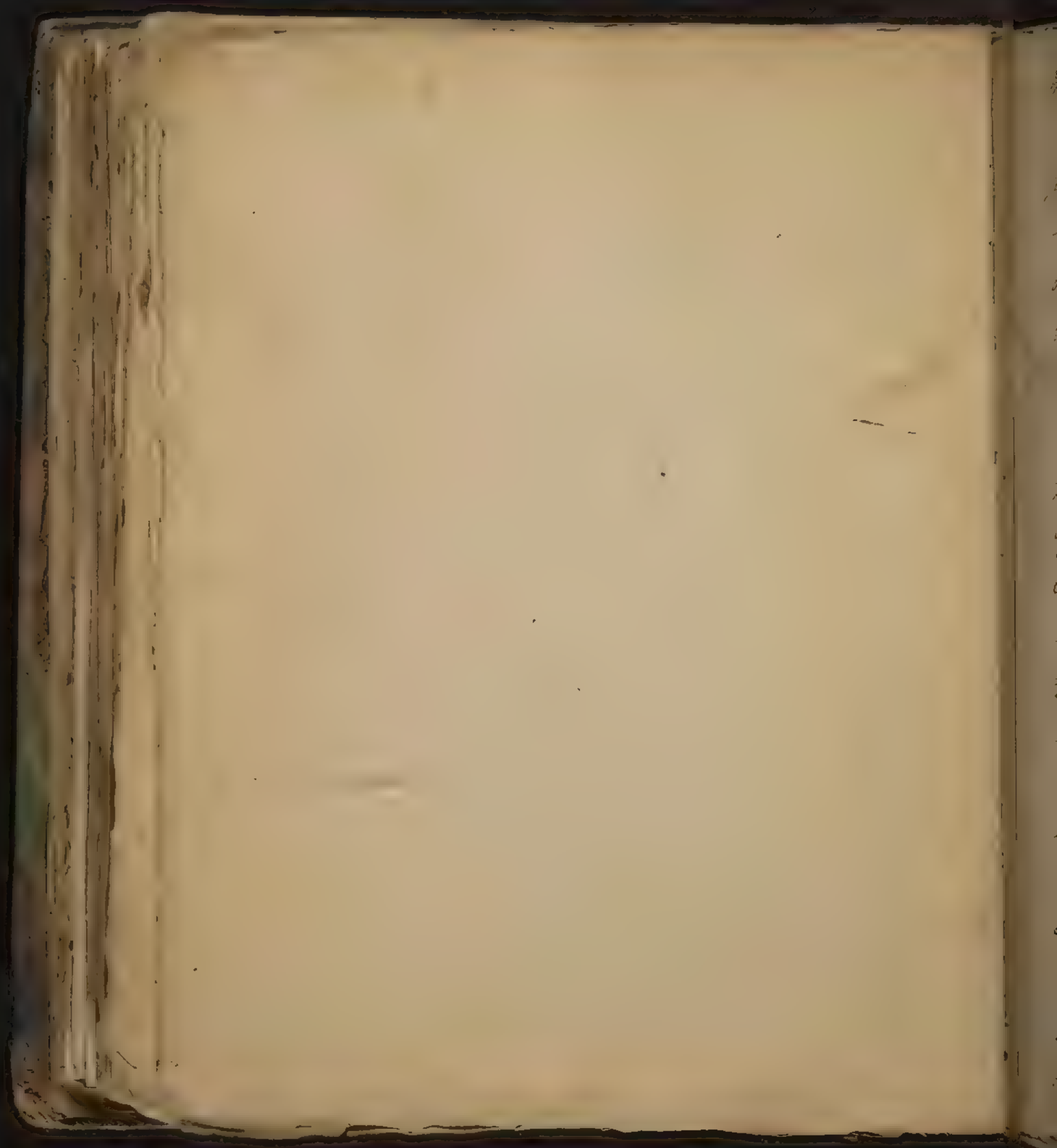
made to reduce it to a regular system.

But, since it has assumed its rank in the circle of Sciences, and has been cultivated as a branch of natural and medical knowledge, greater discoveries, and improvements have been made therein, than in almost any other science.

The Ancients who had very little knowledge of chemistry, entertained very imperfect ideas concerning the chemical principles of bodies.

The most ancient opinion that hath been handed down to us, with any degree of certainty is that of Hermes Trismegistus, the famous Egyptian Philosopher and Chemist, who lived above 3300 years ago, and from whom Chemistry hath sometimes been called the Hermetic Art, and Hermetic Philosophy. According to this ~~ancient~~ ^{modern} Philosophy, (which however, it is probable, is of much later date, than of Egyptian Hermes), there are but three chemical principles in all bodies, viz. Sulphur, and Mercury, that metallic substances, and all other bodies of a similar nature, are composed of a mercurial principle, united with Sulphur.

that
me.



that lapid bodies, have a saline basis, and inflammable bodies, a sulphurous one. To these, supposed principles, were afterwards added, two others, Earth, and Water, and then Earth, Water, Air, Sulphur, and Mercury, were long considered by the Hermetic Philosophers, as the component principles of all chemical objects.

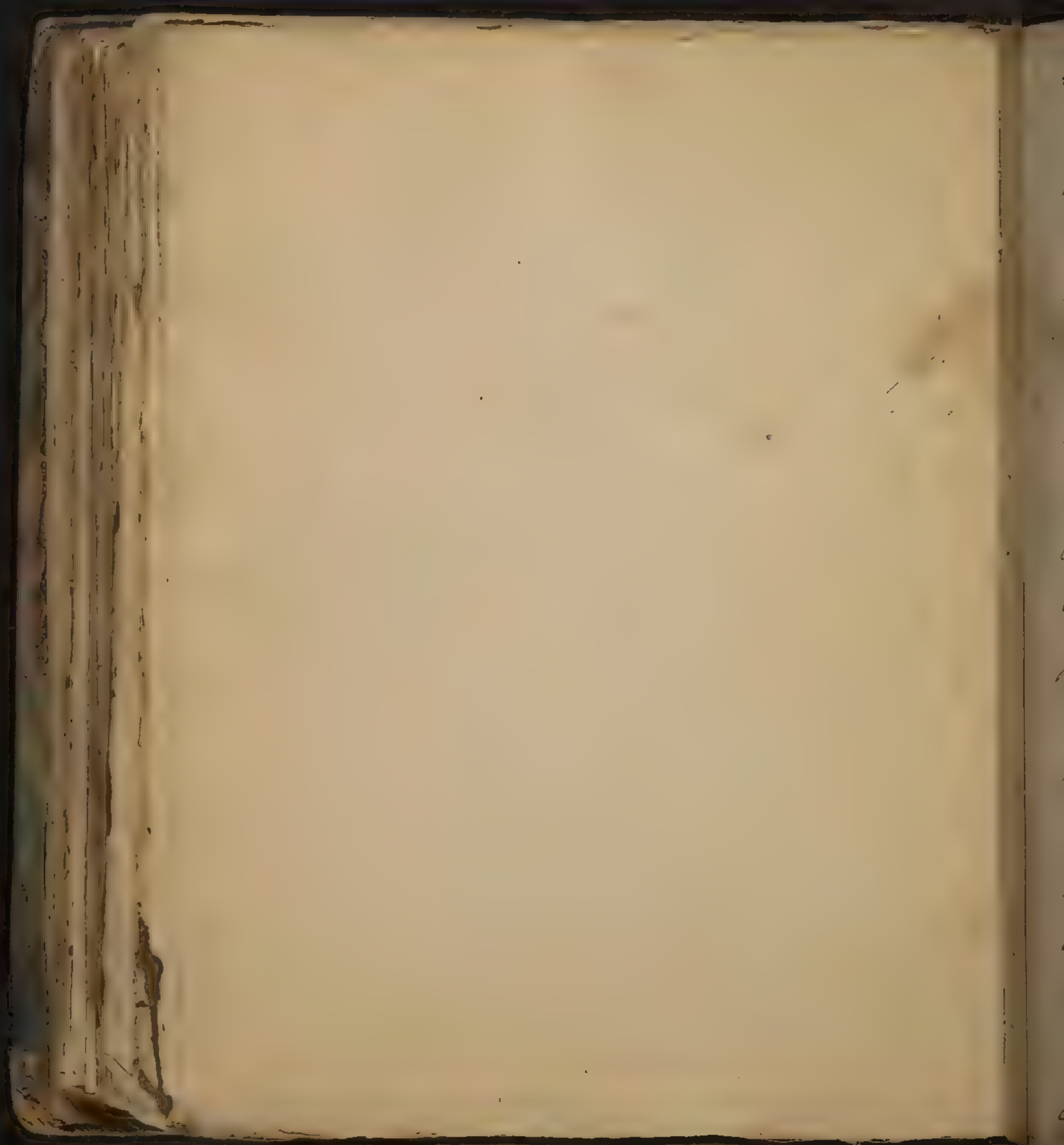
As the variety of sects and opinions, that prevailed among the ancient Philosophers of Greece and Rome, I shall only observe, that Anaxagoras and his followers, supposed the elementary principles of all bodies, to be Fire, — His opinion, however improbable it may appear to many, has been revived in modern times, and, under different technical forms, has met with a number of patrons and supporters. —

The School of Democritus gave rise to the Atomic or Corpuscular Doctrine, which supposes the elementary principle of bodies, to be certain particles of matter, which from their various modes of aggregation, constitute all the varieties observable in



in natural bodies. — The changes, that are continually taking place in bodies, by the regular and progressive operations of Nature, and the alterations produced by the effects of Chemistry; seem to afford some demonstration of the truth of this Doctrine. — But Chemists have never yet been able to discover, whether the differences in the chemical principles of bodies, depend on a difference in the primary atoms of which they are composed, which Philosophers commonly call the physical principles of bodies, or upon the different arrangements, or modes of aggregation, of those primary particles. —

The Peripatetic Philosophy, which universally prevailed, from the days of Aristotle its founder, to those of Bacon, afforded no light to Chemistry; — The imaginary doctrine of Entities, and occult qualities, which pervaded every part of that quibbling System, were altogether incompatible with the mode of investigating the principles of bodies, by che-



medical Encyclopædia. —

The Arabian Physicians were the first, who have given us any particular account of the operations of Chemistry. — They reckon their Alkahest, and Alcohol amongst the chemical principles of bodies. —

For many Ages before and after the revival of literature in Europe, Chemists were generally employed, in the fruitless, and chimerical endeavours, to discover, what they called the Philosophers Stone, an universal Solvent, and the transmutation of Metals. —

Paracelsus and Van Helmont are amongst the most noted and whimsical of this class. —

The Axioms of the former, and the Axioms of the latter, comprehend the chemical, general, and universal principles of all bodies, according to the Alchemists' notion of those times. —

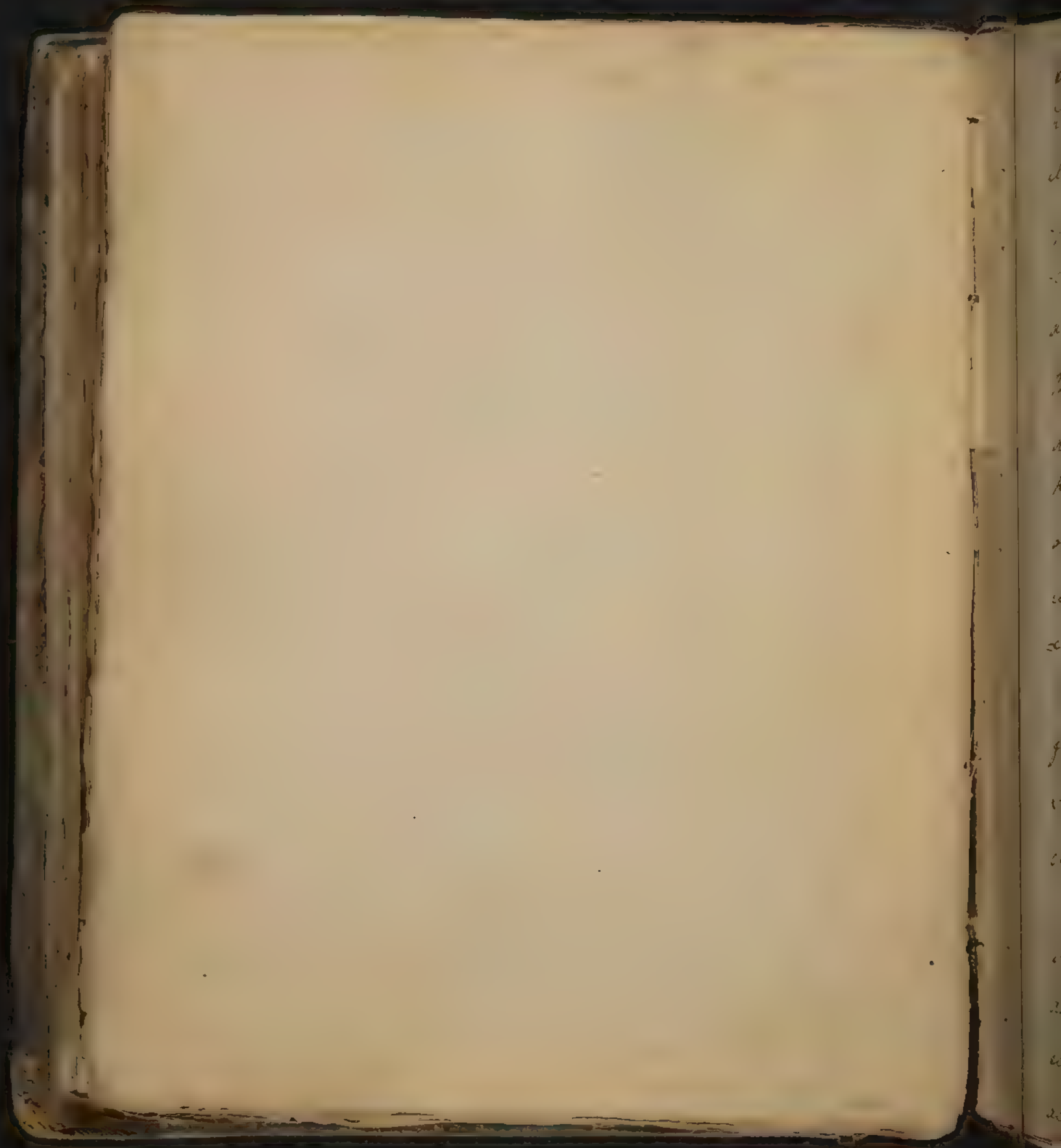
In the last Century, Des Cartes, by combining the chemical Doctrine of Ferment,



tation, into the principles of the mechanic powers, formed an ideal System of Philosophy; but being entirely hypothetical, it was of too short duration to have much influence in Chemistry, as it soon gave way to the Newtonian System, which hath prevailed ever since.

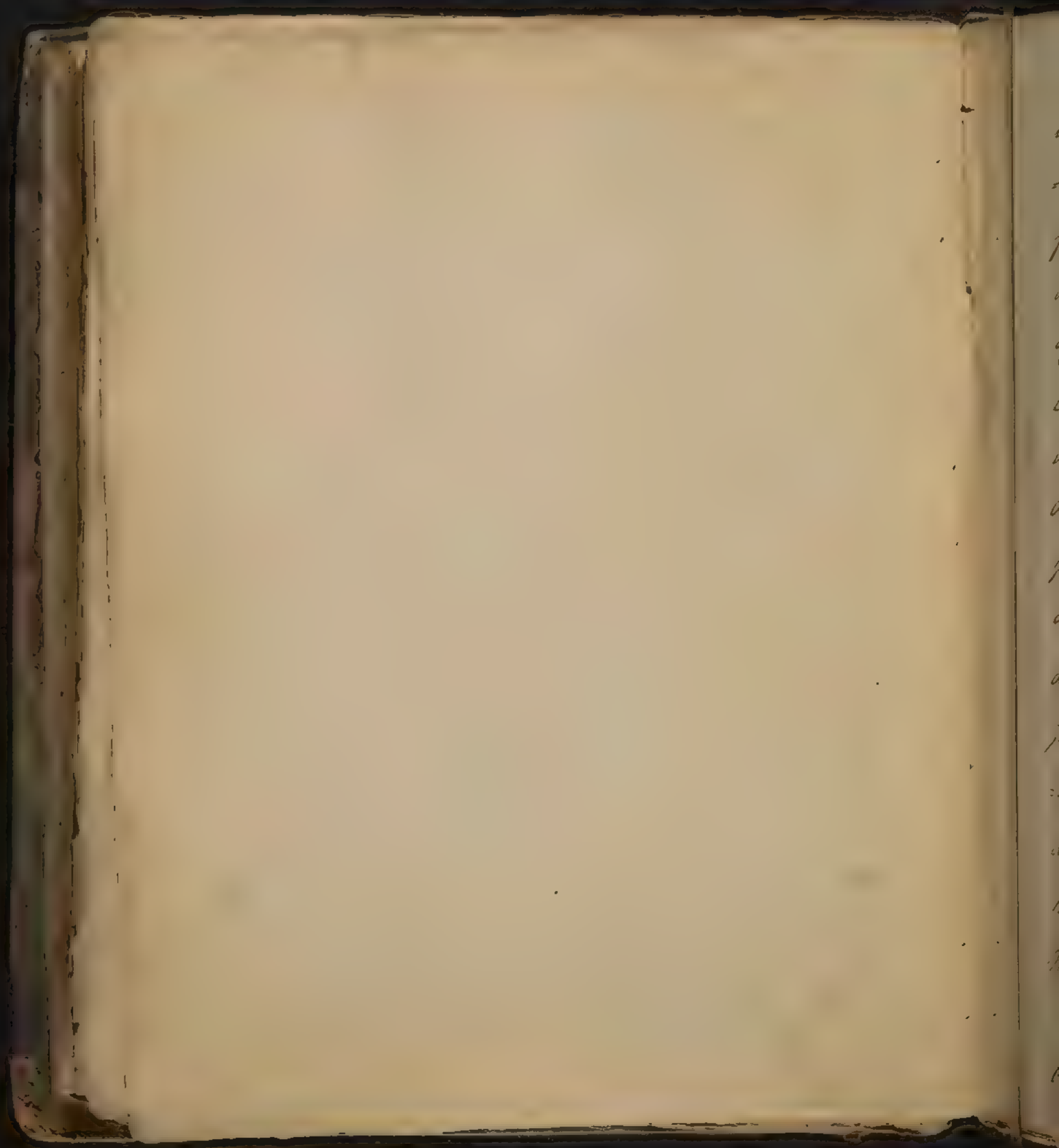
Mr Robert Boyle was the first person, who performed chemical operations upon philosophical principles. — His Experiments on the divisibility of matter, and on the ponderosity of light and heat, revived the ancient Doctrine of the corpuscularians, and laid the foundation for useful discoveries, and improvements in Chemistry. — He was succeeded by Dr. Boerhaave, who supposes that the essential qualities of bodies, depend upon a certain subtle fluid, which he calls Spiritus Rector; and that the chemical principles of all bodies, are, Fire, Air, Earth, and Water, —

But the discovery of the affinity of
bo.



bodies, or the laws of chemical attraction, which
has opened soon after Boerhaave's time, is the true
Era of Chemical Science. By means of this im-
portant discovery, the effects and consequen-
ces of every operation in Chemistry, brought
about by heat and mixture, and the changes
thereby produced in the properties of bodies,
are now clearly understood, and a more accurate
knowledge of the chemical principles of bodies,
obtained. — In consequence of which, it is now
well known, that most, if not all those substan-
ces above mentioned, which the Peripatetic
Philosophers, and after them Boerhaave and his
followers, call elementary principles, are not
simple, but compound bodies, decomposable by
chemical Act. —

As to Fire, notwithstanding the most
investigation of the ablest Chemists, of ^{the} present
day, it still remains a doubt, whether it be an
elementary principle, pervading the pores of
all bodies, or only a particular modification of
mat.



matter, arising from a vibratory motion excited
in bodies, which generates heat, and its concomi-
tant phenomena. Those Chemists who suppose
fire to be a real substance, or elementary fluid,
differ in opinion, as to its natural form, or mode
of action. Some suppose the action of fire, or
combustion, consists in a chemical mixture or
union of the inflammable principle with pure
air; others, in the expulsion of the inflammable
principle ^{from} combustible bodies, by means of pure
or dephlogisticated air, entering into those bodies,
and occupying its place; while others suppose,
pure air is composed of the matter of Fire, com-
bined with a peculiar Basis. That combustion
decomposes this air, by acting on its Basis, and
then the matter of Fire becoming free, assumes
the properties of heat, flame, Light &c. —

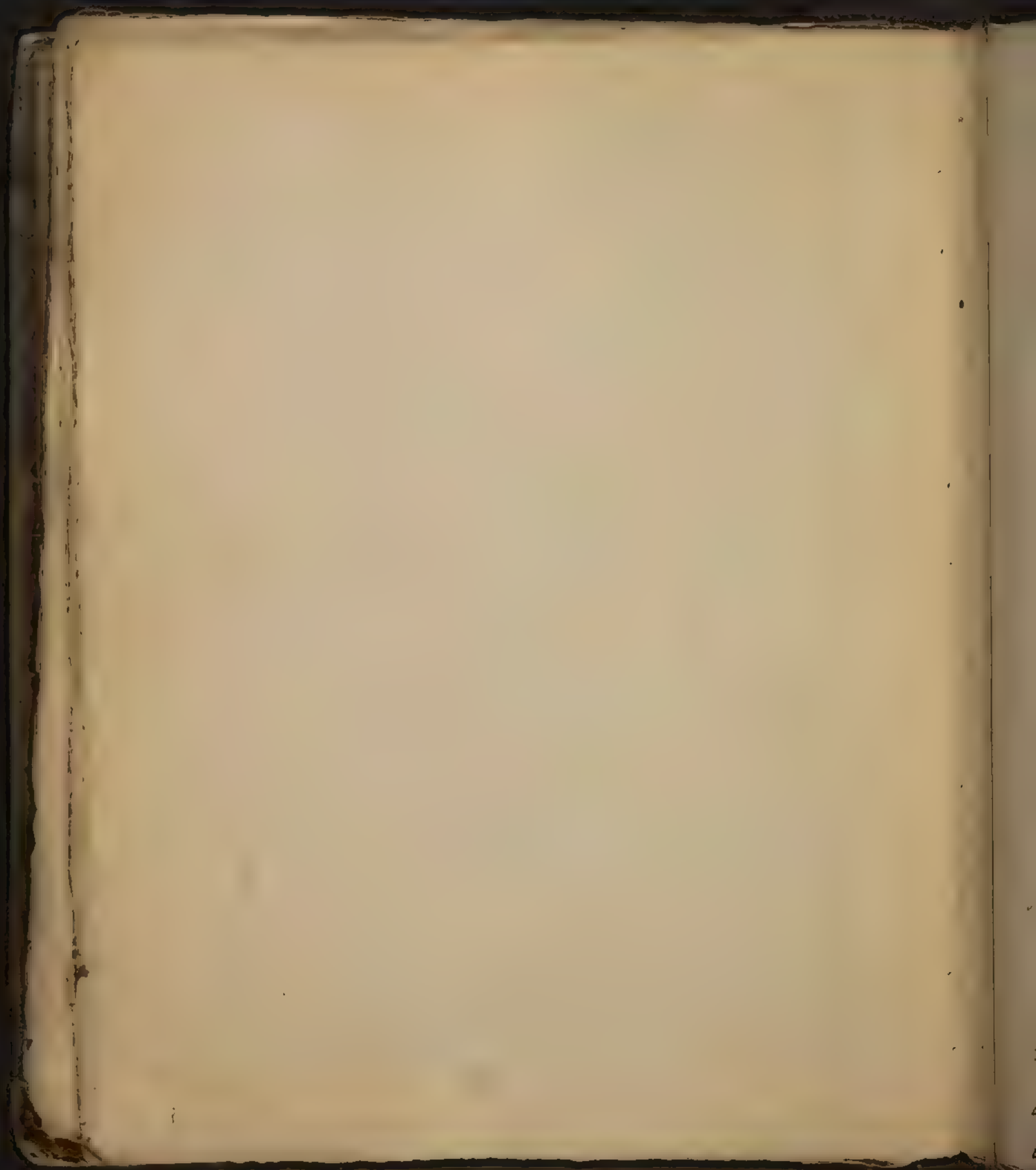
Neither of these opinions seems to me, to
be supported by a sufficient number of unequiv-



vocal power, is enable us to pronounce with certainty, which is the most probable. —

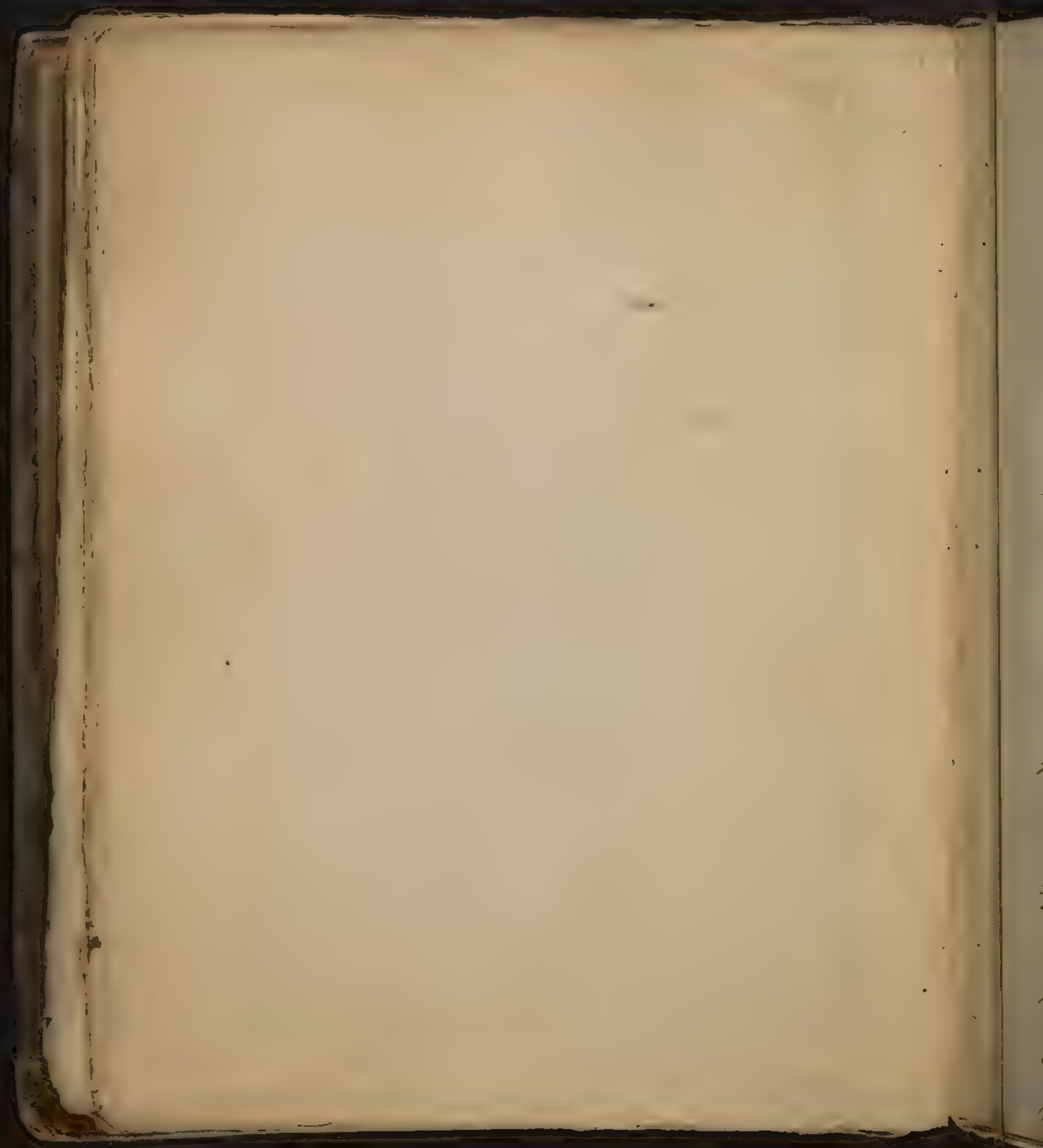
Water in its purest state, has generally been considered, as a simple or elementary body; but some late experiments seem to prove, that it is a compound body, composed of inflammable and pure air united, by a particular Encheusis, or as Dr Priestly expresses it, water is composed of dephlogistated Air, united with an aqueous Basis which may be decomposed by Art. —

Experiments on atmospheric Air have clearly demonstrated it to be a compound body, consisting of a combination of elastic fluids, of different kinds, possessed of different specific properties, naturally blended together, in one common mass. By Analysis, it is found to contain pure or dephlogistated Air, Fixed Air, or Animal Acid, Inflammable Air, and phlogistated or mephitic Air, united together in different proportions. Besides these component bodies, natur



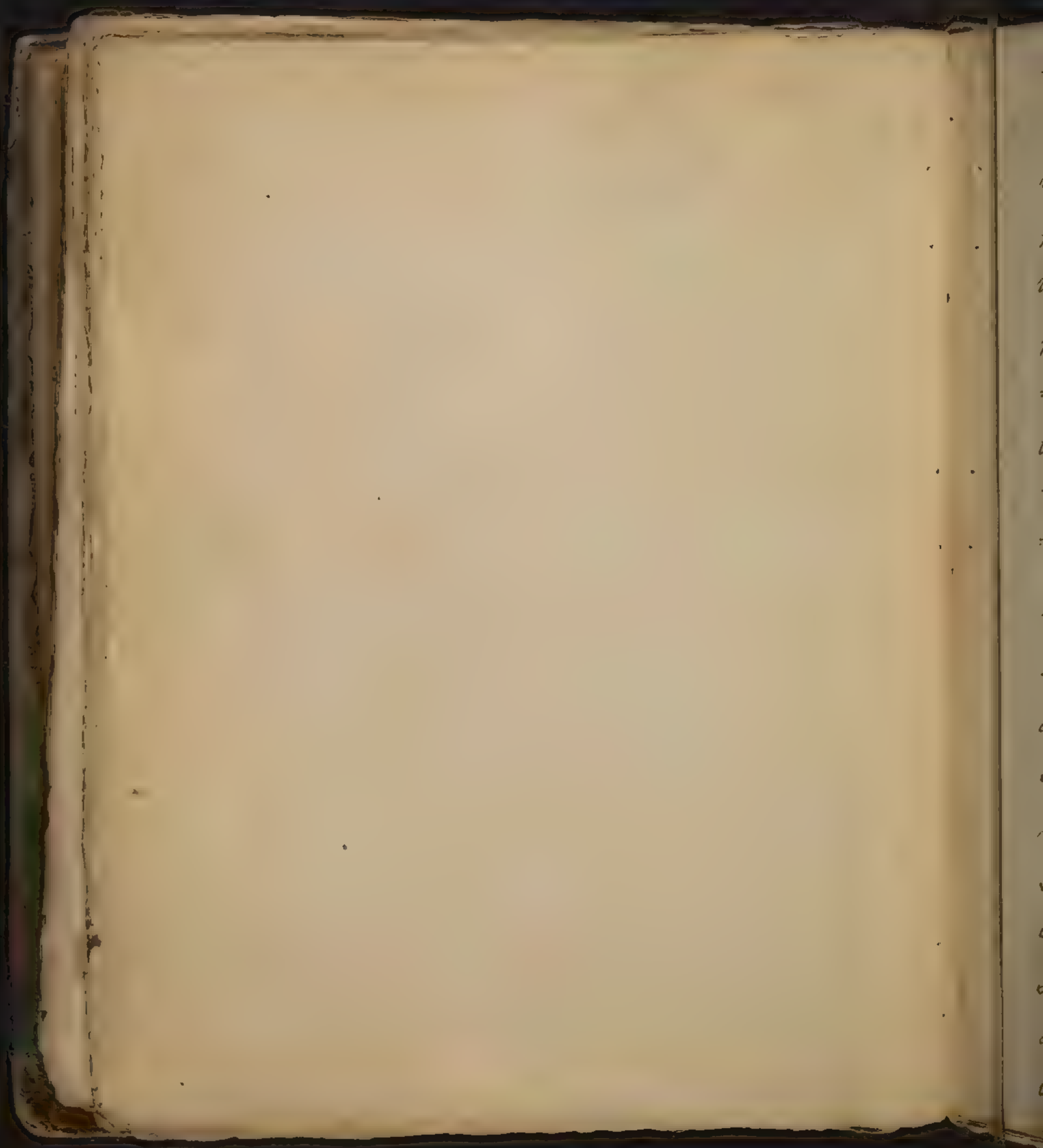
naturally existing in common air, several kinds of artificial air may be produced by chemical art, particularly, the Acid, Alkaline, and Phlogistic air; all of which are found to possess the common properties of ~~the~~ aeriform fluids. —

Some Chemists have supposed that there was but one simple Earth, a earthy Basis, in all natural bodies; this in allusion to the doctrine of ^{the} Hermetic Philosophers, has frequent been called a mercurial Earth; but the most accurate examination of the subject, has never yet fairly discovered such an universal earthy basis; on the contrary, it is found, that there are a variety of Earths, differing materially from each other, in their chemical properties which have hitherto eluded the most powerful efforts of the ablest Chemists, to decompose them; and therefore according to our Definition, are to be considered as chemical principles of ^{the} bodies.



There, by the latest systematic arrangement of the subject, are reckoned five in number; Ponderous Earth, Calcareous earth, Magnesia, Argillaceous earth, and Silicious Earth. -

Dr. Lavoisier a celebrated professor in the University at Halle, in Saxony noted for his singular Doctrine of a Superintending intelligent principle in Physics, has become equally as famous, for being the Author of a chemical Doctrine, of an inflammable principle which he calls Phlogiston, constituting one of the component parts ~~of~~ or chemical principles of bodies. - This theory supposes that metals in their perfect state are compound bodies, composed of an earth united with phlogiston, forming different kinds of metallic substances, according to the nature of the Earth which constitutes the basis; that by the agency of heat, and other means this



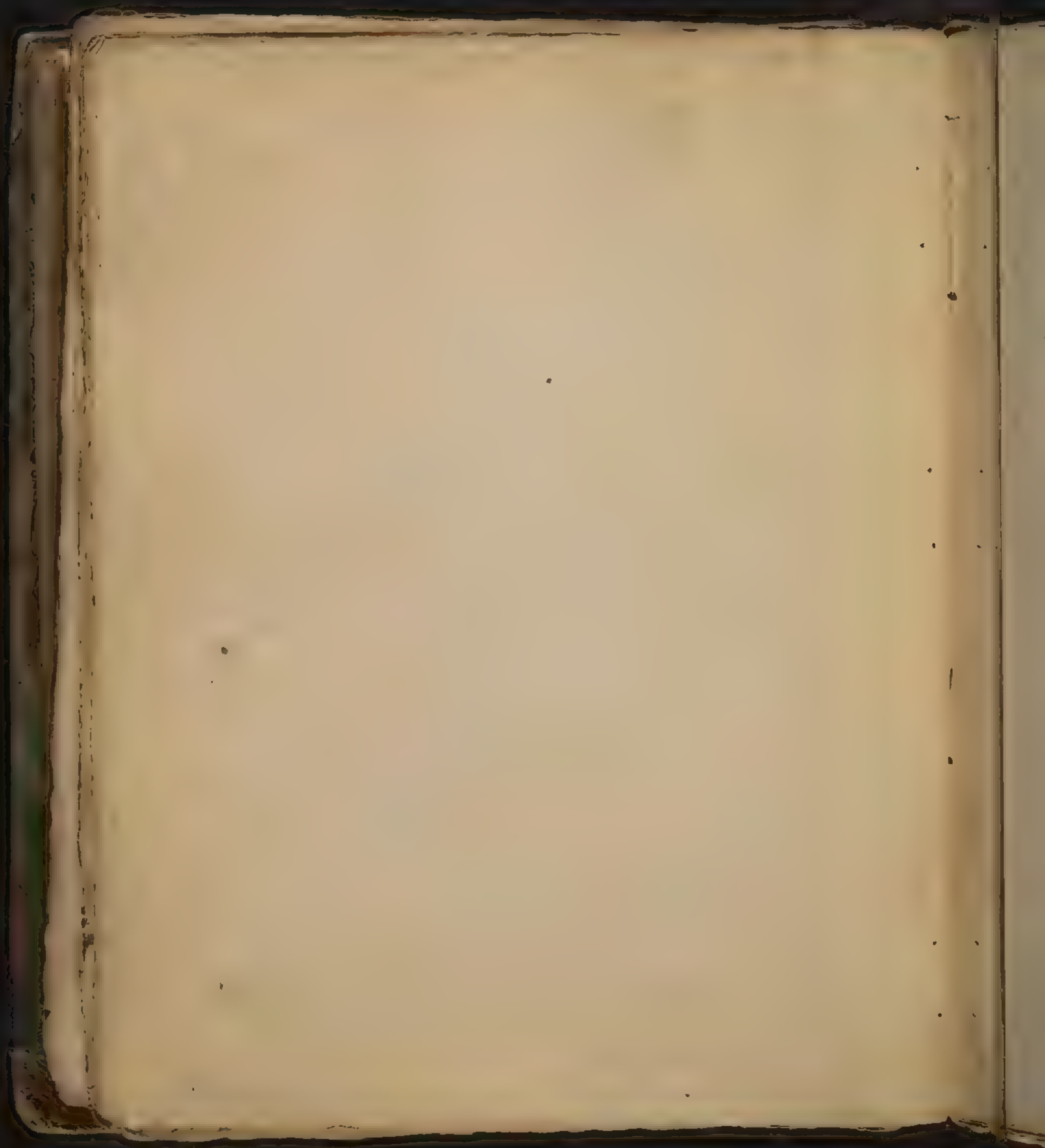
this basis may be deprived of the Phlogiston, and thereby reduced to a calx, which may be again restored to its metallic form, by restoring the Phlogiston. That Sulphur is a compound body, formed of the vitriolic Acid united with phlogiston, which is decomposed by conflagration; and that the combustible property in all bodies depends on the Phlogiston contained in them, which is dissipated in the process of combustion.

This Doctrine of a phlogistic principle, has been pretty generally embraced by Chemists ever since Dr. Stahl's time, and explains in a very satisfactory manner, many of the Phenomena shewable in Chemistry. It must notwithstanding, be admitted, that there are some facts which appear wholly incompatible with such a theory. In the calcination of some metals, Lead, for instance, the weight of the metal, instead of being diminished by the supposed dissipation, of the Phlogiston, is



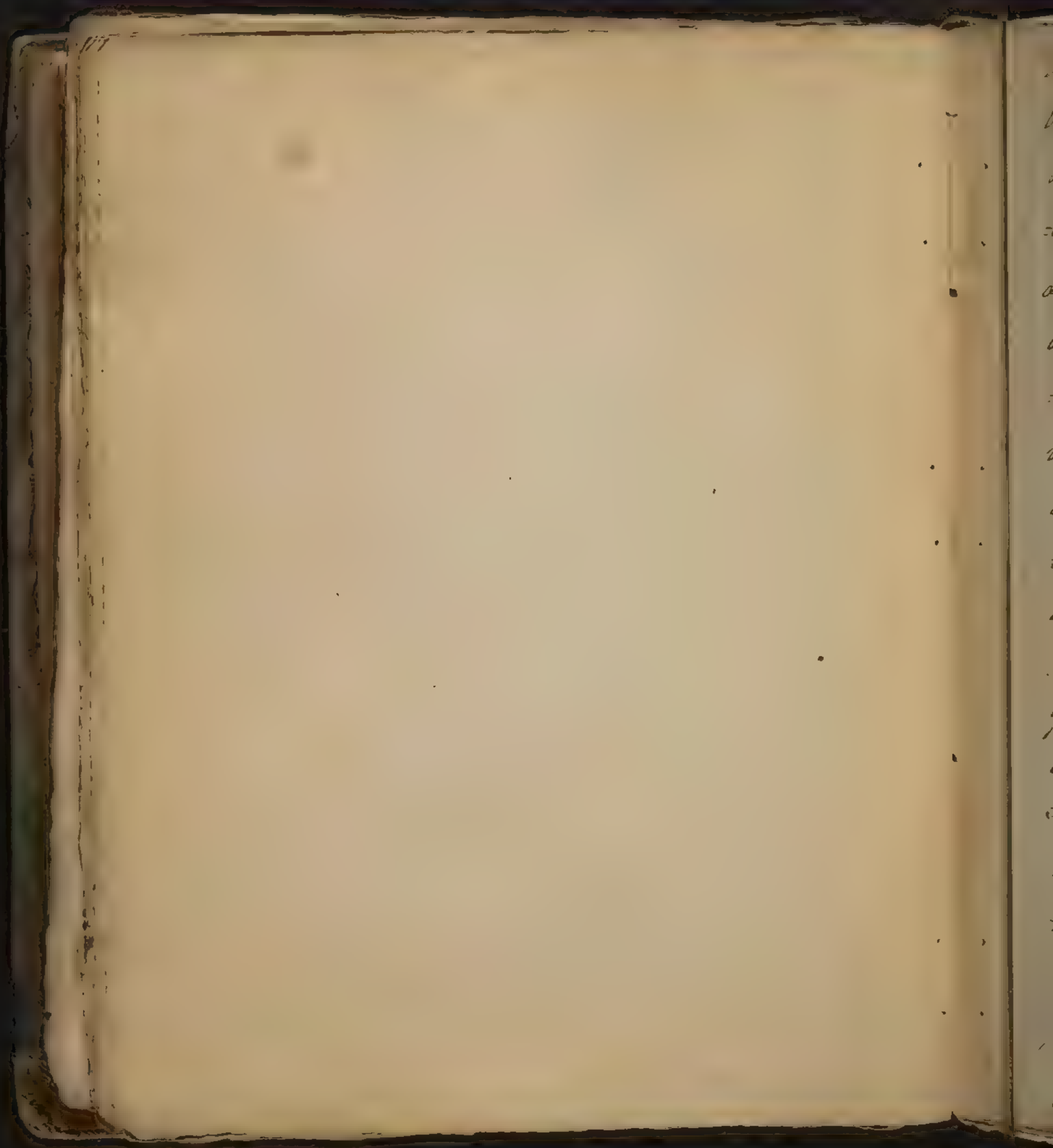
is considerably increased; and in the deflagra-
tion of Sulphur, the weight of the vitriolic
acid obtained, is greater than the Sulphur
employed. A further objection arises to
this doctrine, from our absolute uncertain-
ty of the specific nature of phlogiston, and
the diversity of opinions concerning it;
some supposing it to be a substance sui generis
others, that it is inflammable Air, while
others suppose it to be elementary fire; and
a stronger objection still arises from its
having never yet been obtained in a sepa-
rate state, in any sensible form whatever.
For these, and other reasons of a similar nature
Mr. Lavoisier, a french Chemist, has lately de-
nied the existence of phlogiston altogether,
and has substituted pure Air in its ~~place~~ place
in which opinion he is followed by some
others. —

Phis.



This new Theory supposes pure Air to be the principle, which produces the chemical changes in bodies, and that all the phenomena which, by the phlogistic Theory, are supposed to depend on the separation of phlogiston, according to the pneumatic doctrine, arise from the combination of pure Air, and vice versa. Thus the phlogistic Theory supposes Phlogiston constitutes combustibility in bodies, the pneumatic Theory that a very great tendency in bodies, to unite with pure Air constitutes Combustibility.

In all cases where phlogiston is supposed to be disengaged, the new doctrine supposes combinations of pure Air take place, as in combustion, and calcination; and on the contrary, where phlogiston is supposed to form combinations, this Theory supposes the Air to be disengaged, as in the reduction of metals; and that metals are converted into



into acids, not by the subtraction of phlogiston, but by the addition of air; and are again reduced to their metallic form, not in the reception of phlogiston; but by the loss of the additional air, that was combined with them, in the process of calcination. And all substances which the phlogistic theory supposes to be compound bodies, containing phlogiston, according to the new doctrine, are simple bodies, which have a great affinity with pure air, as Sulphur, Metals, &c. —

It would be taking up too much of your time, to enter into a full examination of the facts adduced to support this theory; I shall therefore, only observe, that the additional weight which some metals always acquire ~~by~~ in calcination, corresponds very nearly with the quantity of air, supposed to be absorbed in the process. That from experiments made by deflagrating.

L. L.

111
Sulphur, it is found that it will not burn
without the help of air, that air which has
been employed in its combustion will not
serve for a new combustion, consequently,
during combustion, the Sulphur absorbs the
purest part of that fluid; that the vitriolic
Acid which results, exceeds the weight of the
Sulphur which produced it, by the exact
weight of the Air lost, during combustion,
by this, the Sulphur is supposed to combine
with pure Air which is absorbed, in order to
form the vitriolic Acid, — This Acid is there-
fore a compound of pure Air, and Sulphur
and Sulphur, instead of being a compound
body, is only one of 2 principles of the
vitriolic Acid, and requires an union with
pure Atmospheric Air, to form this Acid,
which is effected by the process of combus-
tion. — There

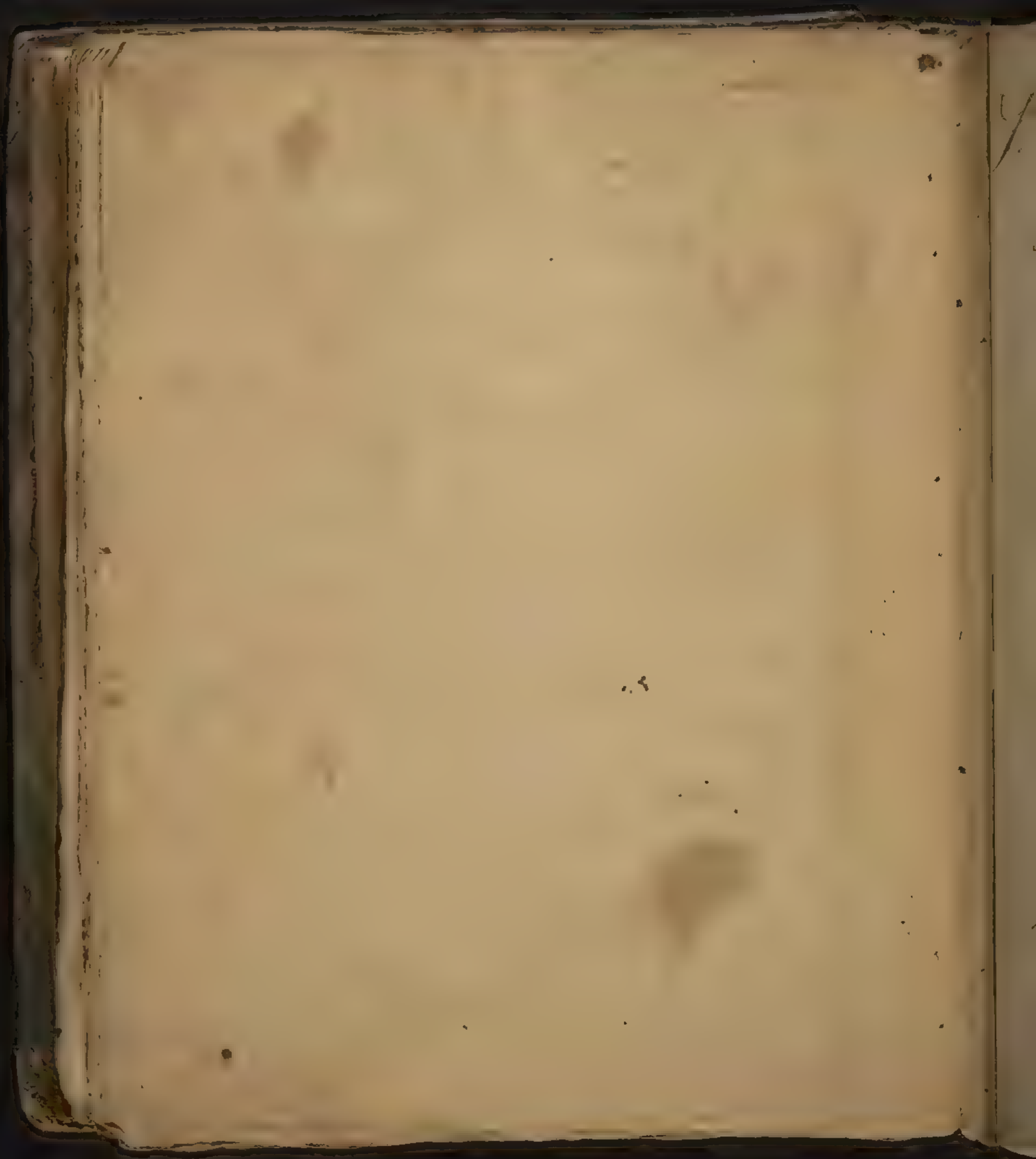
~~Sulphur~~ These Experiments afford a considerable degree of probability. This Doctrine other experiments, on the contrary, render it doubtful. — No method has yet been discovered of obtaining Sulphur by a simple decomposition of the vitriolic Acid. —

Further Experiments, therefore, and a more complete investigation, seem necessary, to establish this curious, new, and interesting subject of Chemical Science. —



Thursday April 10th 1788,

Taken by H. L. Mer

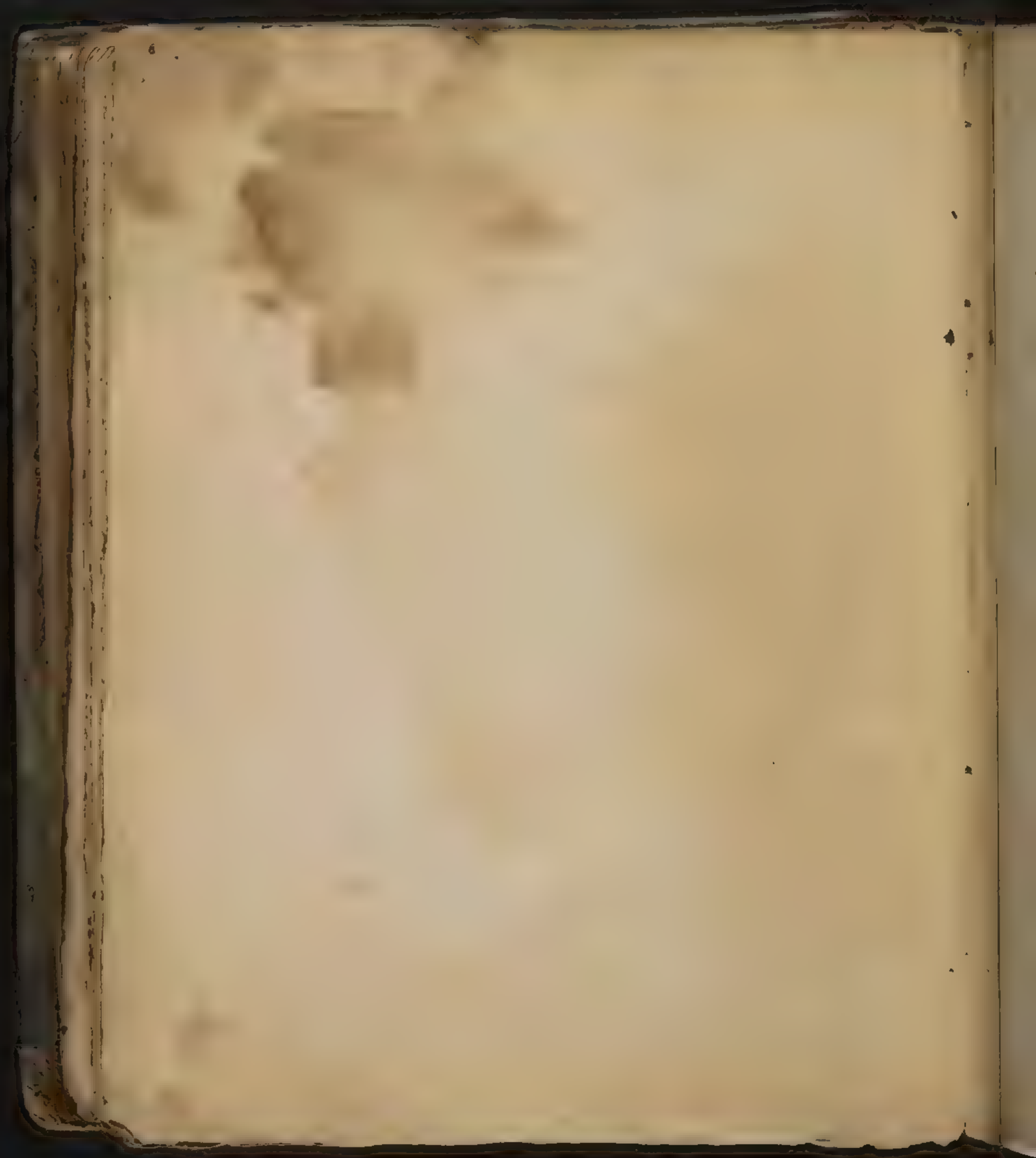


of the

... some ...
... observations ...
... and con- ...
... modern ...
... and ...

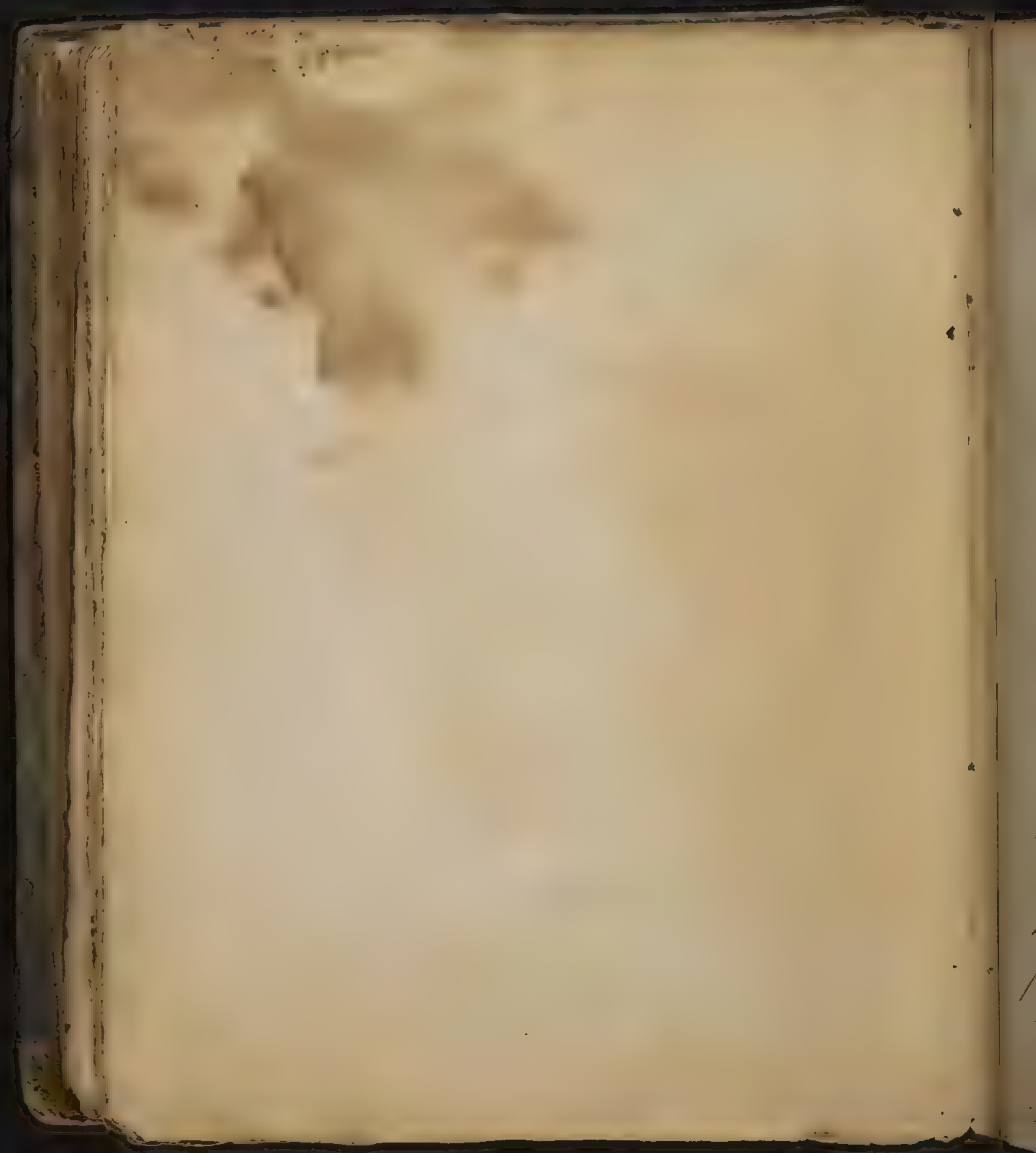
... and certainly ...
... and its com- ...
... many curious & ...
... have lately been made ...
... for chemical in- ...
... and late ...
... observations on ...

... transparent elastic ...
... properties generally known ...
... unnecessary to be ...
... to ...
... especially ...
... for ...

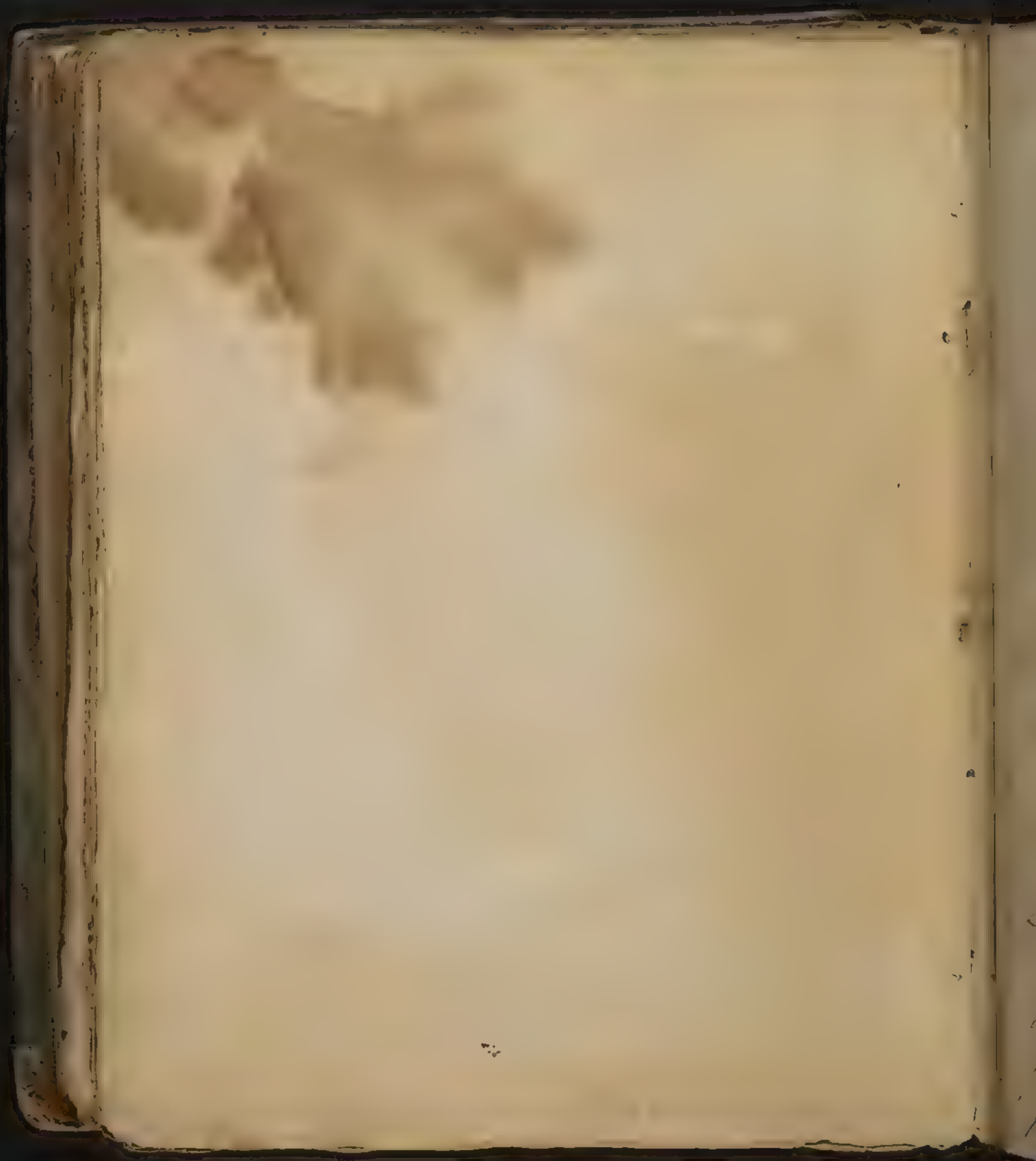


... the ...
... clearly
... state
... compound
... a certain
... to be the
... that the mat
... except in
... the form of
... in which state it possesses
... that there
... may be decomposed and
... combination with
... are found
... from these they
... —

Experiments have further demonstrated that
common ... is compound of several
kinds of ... different from each other,
... in a ...
... appear to have
... different
... .



The atmosphere is a mixture of gases and vapours, and is the medium through which the sun's rays pass to the earth. It is principally composed of oxygen and nitrogen, and contains a small quantity of carbonic acid gas, and water vapour. The atmosphere is also the medium through which the heat of the sun is transmitted to the earth. It is the atmosphere which protects the earth from the harmful rays of the sun, and it is the atmosphere which makes life possible on the earth.



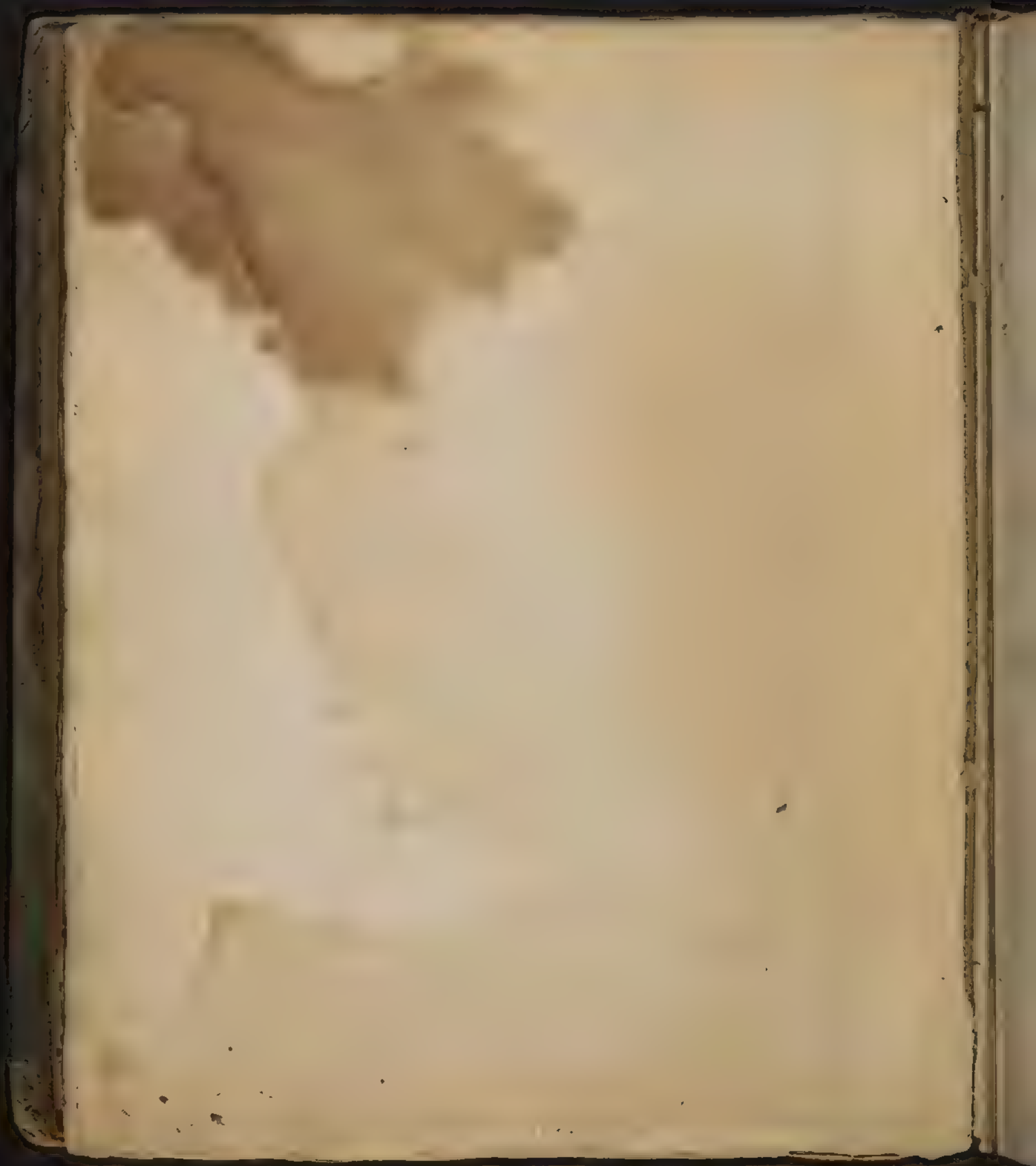
[illegible]

The existence of pure air in the atmosphere
as a distinct portion of the aerial mass, was
first demonstrated by Priestley who calls it de-
phlogisticated air, from a supposition that it



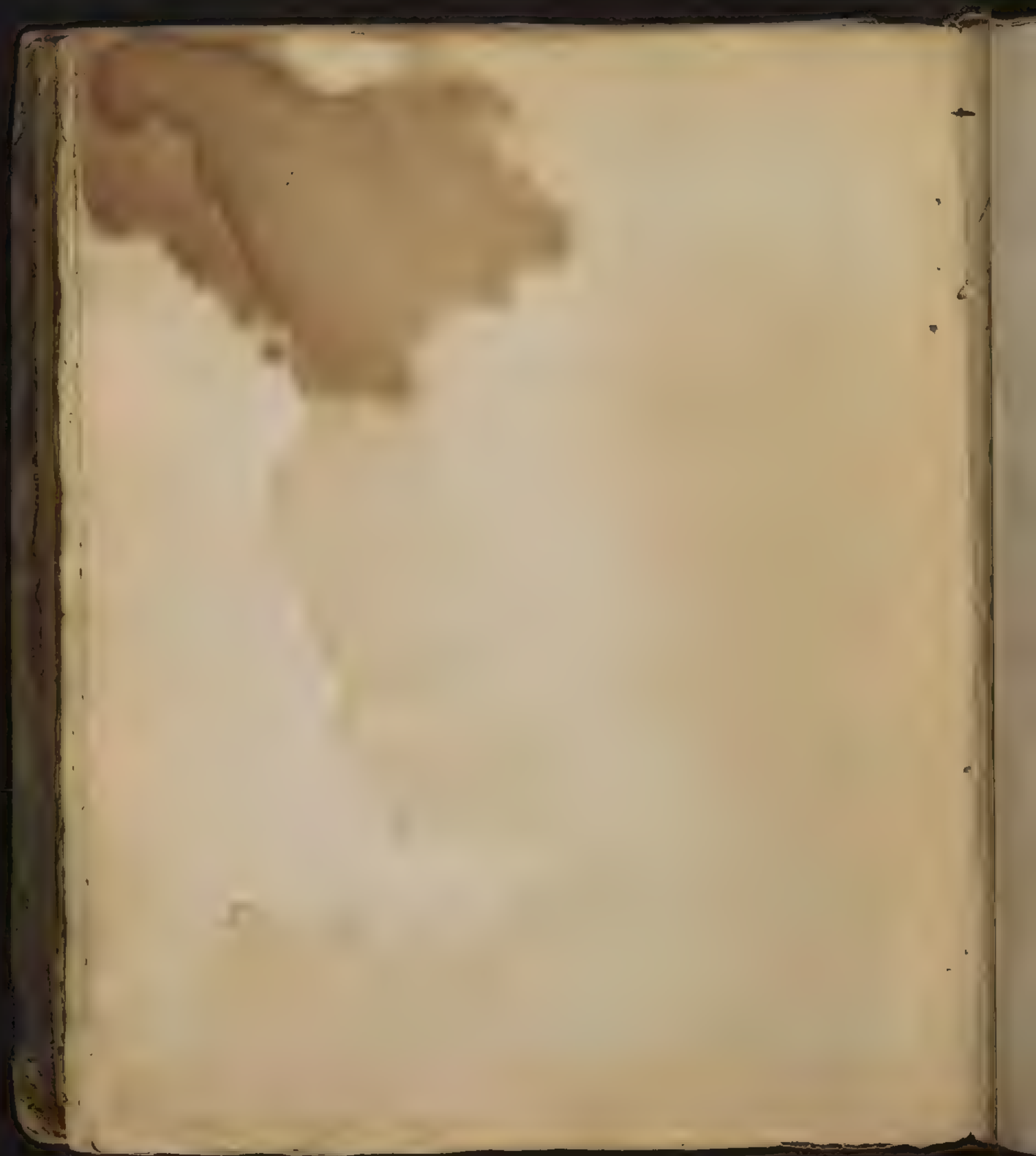
consists of common li. ...
portion of the air ...
in a ...
... metalli ... and ...
... the ...
... only to contain ...
... which ...
... the heat ... in the ...
... it ...

Pure li. is a ... common
atmospheric li. and is that part of it which
... maintains animal life.
... known ... capable
... the combustion of
... three times
... atmospheric air ... this
... a body which requires
four cubic feet of atmospheric air to be com-
pletely burned will require no more than one
cubic foot of pure li. for the same purpose; which
is to a great part the pure li. contained in the
... state does not exceed
the proportion of one ~~fourth~~ fourth part of the



commonly called the *acid of iron*
pure Air is decomposed by the matter of heat &
fire being elevated and separated from the
basis united with it. In this manner the whole
theory of combustion is explained by showing
the decay the existence of a certain portion, or principle
of inflammability in the air.

The basis of pure Air also constitutes one
of the component parts of all acids & bodies, hence
it is called by some chemists the oxygenous,
or acidifying principle in those bodies; and
the difference observed in acids is supposed to
depend entirely on the different kinds of matter
with which this basis of pure Air is united in
forming those acids. The basis of pure Air
combined with metals by means of heat, or in
any other way destroys the metallic quality,
and converts them into calces which may again
be reduced into their metallic form by separating
this basis from them. But the most curious
& extraordinary discovery respecting this
aerial basis, is that it forms one of the compo-
nent parts of common water; for, if the basis



or pure air is mixed with the
moisture in each
water is produced. Each of these
by two small vessels is placed in a
Mephitic Air, as it is called, is
Air with which it has been mixed. It is
until very lately, is called phlogisticated
Air by Dr Priestly. Because it is supposed to
be common Air, attended by an addition of
Phlogiston derived from ~~some~~ bodies by
combustion, and in all appearances both of
nature and that which is called phlogisticating
Air. But it is now fully ascertained, that
it is not such a body, formed in the Atmosphere,
and is calculated in composition, the same Air
is absorbed or diluted. Many discoveries have
lately been made respecting the nature & proper-
ties of this Air. It is specifically heavier than
atmospheric Air. It instantly extinguishes flame
and destroys or deprives animals of life when
they are put into it. — Mixed with pure Air in the
proportion of about eight parts of Mephitic
to twenty eight parts of pure Air, artificial Atmos-
pheric Air will be formed.



It is not without some degree of surprise that
I have now to inform you that the
to be guaranteed, & may be considered as
ing. — The fact of the existence of even
in the human system, & the discovery of the clas-
sical in the human system. This discovery
is certainly sufficient to show the formation of
the nervous system in the human system, and the ce-
lebrated & numerous properties of that system
which these facts & properties are combined
with the fact of the animal system in the system of
the system. It is generally, some agitable substances
occur in the system in consequence of
this combination effected by the action of the
system. It is not that the system is obtained
from the system. Neither is it a system, nor acids,
and the animal action in this system. —

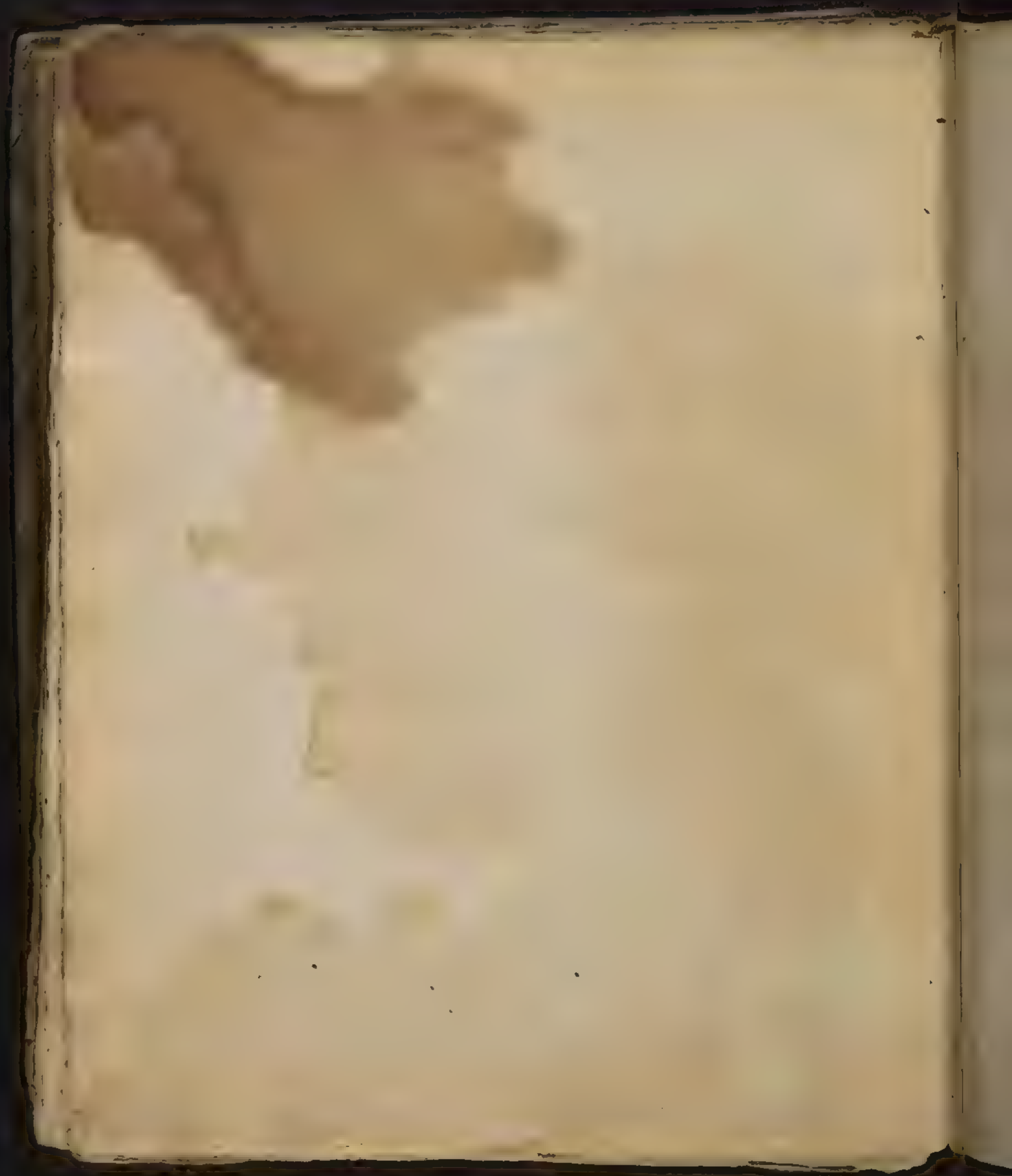
The various properties of the system are
are more particularly entitled to the attention
of the system, & they throw great light on the
medical system, & in the human system.
It is known that the system affects in certain cir-
cumstances, & the system is the system of
the system, & the system is the system of the system.



The first action of the
and more, in the
in a given
in a given quantity of
under a glass vessel the air
the same air & leaving the
the process of combustion or
the air and cause the
account for the
in a glass vessel or other
on a table in a room.

We were until very lately
convinced that air with fixed air, but this
early distinction from it by being specifically
not changing the colour of vegetable
and by allowing no precipitation in lime
water, & even it is which being the
the said air.

The existence of fixed air is the discovery of
Lavoisier, but it was the first who discovered it.







The substance which is
ingested with the food
is the lightest of all
the substances which
are known to man. It is
by the examination of this substance that it is ascertained
that it is contained in the human body, and it is
the first substance which is found in the
blood. It is also found in the
urine, and it is the only substance which is
found in the sweat. It is also found in the
tears, and it is the only substance which is
found in the saliva. It is also found in the
milk, and it is the only substance which is
found in the blood of the infant.

It has been found that this substance will absorb eighty
parts of pure air, during its combustion,
and will form a water nearly equal in weight
to the air employed. As water is composed of
the substance which is examined, and pure air,
it is evident that the substance which is examined
contains a greater quantity of the substance which is
examined than the air does. It is also evident that
the substance which is examined contains a greater
quantity of the substance which is examined than the
air does. It is also evident that the substance which is
examined contains a greater quantity of the substance which is
examined than the air does. It is also evident that the
substance which is examined contains a greater quantity of the
substance which is examined than the air does. It is also
evident that the substance which is examined contains a greater
quantity of the substance which is examined than the air does.



the Air this Air is
consequently the air
must be not water
inflammable
then. The Air is
which is necessary
the oxidation of those metals. The Air during
as happens in the lungs commonly employed for
filling Balloons with this kind of Air. Inflammable
Air on the contrary will decompose the
nitric Acid & metallic Salts by combining them
with the pure Air contained in those bodies, by
which means the Acid is reduced to sulphur,
and the Salts to the metallic State. —

The cause of vegetable growth is in contact
with the light, & the property of absorbing
the incombustible Air of Water, and thereby, dis-
engaging the pure Air which enters into its
composition, and in this manner it is that
the quantity of pure Air is increased in the Air.
— here by vegetation. —

All bodies capable of combustion are found
to contain Inflammable Air, & when they



may be determined the

in the combustion

seen in the mass

in the combustion

in the combustion

in the combustion

in the combustion

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in the combustion



The sudden disengagement & anim-
mation of this Air. —

There is a great deal of
principally in a ...
Mass of the ... usually
mixed with ... a vari-
ety of compound Airs; and the most com-
mon of which we may call Common Air.
This is ... mixed with inflammable
Air constitutes the Inflammable Air of Marshes.
It is produced by the putrefaction of vegetable &
animal substances. It is disengaged from sta-
agnant water; and in all places where animal
matter putrefies in water, it may be set on
fire by applying any burning body to the
surface of such water immediately after agi-
tating it. — This Air accompanies, precedes,
or follows the formation of volatile Alkali which
takes place in putrefaction. It burns with a
blue flame, and detonates with difficulty in
pure Air, by which mark it is easily distin-
guished from simple inflammable Air.

The Air obtained by distillation from
some vegetable matters, in particular from Tartar



in woods, in coal, &c. &c. &c. &c.
is a mixture of
Hydrogen with the air, &c. &c. &c. &c.
be readily ignited by the fire, &c. &c. &c. &c.
by means of Lime, &c. &c. &c. &c. or other
mineral substances. —

There is a species of Air which, tho' it never
yet has been obtained from the Atmosphere, is
in nature but indistinct known to exist naturally
in the bowels of the Earth. It may also be
artificially produced by decomposing Hepar
Sulphureum with acids, and has a strong fetid
sulphureous smell. It is usually called Hepat-
ic Air. It is, tall in which this Air most
commonly presents itself to us, is in combina-
tion with water, in the form of those warm, mi-
neral Waters, or springs, called Sulphureous
waters, &c. &c. &c. &c. &c. &c. &c. &c. &c.
composition. Hepatic Air partakes of many of
the properties of sulphuric & inflammable Air.
It is a mineral and is very easily with a slight
blue flame. But it is easily distinguished
from all other Airs, by its very strong fetid
smell. —



1. The first of these is the
2. The second is the
3. The third is the
4. The fourth is the

When two bodies of a different
composition or composition

The composition of the
Bodies of the first is
only a simple composition
of the composition of the
Bodies of the second

1. Law is a system of principles
which govern the conduct of
human beings in the pursuit
of their interests.

2. Law

The object of law is to regulate
the conduct of human beings
in the pursuit of their interests.

3. Law

The object of law is to regulate
the conduct of human beings
in the pursuit of their interests.

The object of law is to regulate
the conduct of human beings
in the pursuit of their interests.

The object of law is to regulate
the conduct of human beings
in the pursuit of their interests.

The object of law is to regulate
the conduct of human beings
in the pursuit of their interests.

I have been thinking of you very much lately, and
 wondering how you are getting on. I hope you are
 well and happy. I have been very busy lately, but
 I have managed to find some time to write to you.
 I have been thinking of you very much lately, and
 wondering how you are getting on. I hope you are
 well and happy. I have been very busy lately, but
 I have managed to find some time to write to you.

I have been thinking of you
 and wondering how you are
 getting on. I hope you are
 well and happy. I have been
 very busy lately but I
 will write to you soon.

hence to care
O. A.

20. 10. 1866

1. To 2000 000

1. To 1000 000

1. To 500 000

1. To 250 000

1. To 125 000

1. To 62 500

1. To 31 250

1. To 15 625

1. To 7 812 1/2

1. The first thing I noticed
when I stepped out of the
plane was the cold air.
It felt like a blanket.
The second thing I noticed
was the smell of pine.
It was everywhere.
The third thing I noticed
was the sound of the
water. It was so loud.
I had never heard it
before. It was like a
million voices all at once.
The fourth thing I noticed
was the sight of the
mountains. They were so
big and so close.
I had never seen them
before. They were like
giants standing in front
of me. The fifth thing I
noticed was the taste of
the air. It was so fresh.
I had never tasted it
before. It was like a
sip of heaven.

[Faint handwritten text, likely bleed-through from the reverse side of the page.]

The above is a list of the
 names of the persons who
 have been appointed to
 the various offices of the
 Board of Education for
 the year 1888-89.

[Faint handwritten text, possibly "The end of the world"]

1. The first of these is the
 2. the second is the
 3. the third is the
 4. the fourth is the

See it in the next issue
in back, the last number H.

The ... of ...

1. ...

2. ...

3. ...

4. ...

5. ...

6. ...

7. ...

8. ...

9. ...

10. ...

11. ...

12. ...

My dear Mr. [illegible]
I have the honor to acknowledge
the receipt of your letter of the
[illegible] inst. and in reply to
inform you that the same has
been forwarded to the proper
authorities for their consideration.
I am, Sir, very respectfully,
Your obedient servant,
[illegible]

[Faint handwritten text, likely bleed-through from the reverse side of the page.]

1. The first is the
the second is the
the third is the

4. The fourth is the
the fifth is the
the sixth is the

5. The seventh is the
the eighth is the
the ninth is the

6. The tenth is the
the eleventh is the
the twelfth is the

7. The thirteenth is the
the fourteenth is the
the fifteenth is the

8. The sixteenth is the
the seventeenth is the
the eighteenth is the
the nineteenth is the
the twentieth is the

1. I have been thinking of you
 2. I have been thinking of you
 3. I have been thinking of you
 4. I have been thinking of you
 5. I have been thinking of you
 6. I have been thinking of you
 7. I have been thinking of you
 8. I have been thinking of you
 9. I have been thinking of you
 10. I have been thinking of you

[Faint, illegible handwriting on aged paper, possibly a ledger or account book. The text is too faded to transcribe accurately.]

1857. The present one is a copy
of a letter from the Secretary of the
Board of Agriculture to the
Hon. the Secretary of the Treasury
regarding the proposed
and proposed to be

the Board of Agriculture of
the United States
which the Board of Agriculture has
been authorized to do
- 1857. - The Board of Agriculture
has a
large number of
persons who are
interested in the
Board of Agriculture

The Board of Agriculture
is a body of
persons who are
interested in the
Board of Agriculture

2, How are

A.

the ovaries of the female are placed in the laboratory of the ovary, and are separated from the other parts of the body.

1st. The ovary is a small, oval, yellowish, fleshy body, situated in the abdominal cavity, near the uterus.

2nd. The ovary is composed of two parts, the outer part, which is the ovary proper, and the inner part, which is the corpus luteum.

3rd. The ovary is surrounded by a double coat, the outer coat being the tunica albuginea, and the inner coat being the tunica vaginalis.

4th. The ovary is connected with the uterus by the ovarian ligament, and with the broad ligament by the ovarian suspensory ligament.

5th. The ovary is supplied with blood by the ovarian artery, and with lymph by the ovarian lymphatic vessels.

6th. The ovary is the source of the female sex, and is the seat of the development of the ovum.

7th. The ovary is the seat of the secretion of the female sex, and is the source of the female sex.

8th. The ovary is the seat of the secretion of the female sex, and is the source of the female sex.

2. What is the function of a Vessel in the Brain?

A. It is a sphere with two apertures; - the one large to receive the blood of the Arteries: the other smaller to afford vent for the liquor.

2. What is the part called?

A. The Intestine of the Brain.

2. May dissection be performed on the Brain?

A. Yes on a fresh Brain.

2. What is a Fossa frontalis?

A. It is that in which the Brain is contained by the Bones.

2. For what is the Fossa frontalis?

A. It is the place where the Brain is contained, and is the place where the Brain is contained.

1. What is the use of the
of the body of the bone
are almost always of the form of
an inverted cone. The H. of the
H. of the bone is the H. of the

2. What is the best material to
make needles with?

Ans. Platinum.

2. What is the object of such de-
compositions as are effected by
means of galvanism?

Ans. To see.

2. How is it effected?

Ans. By the combustion of the H.

Put Coal or Charcoal -

2. What is the purpose of the

Charcoal - on the same

1. The many families of the
country with their various
clans

2. The same is done
of the country with a view
to the most perfect knowledge

3. The same is done
of the country mentioned and
placed into a part which
is to be applied and put with
the part upon every part of the
country.

2. That the pages do, the same
as the country.

3. It contains a few plates
of the country of the
country of the country.

1. The filament is still strong
to be so easily interrupted in
case of any fault in the point
of the needle.

2. How do you explain the change
of shape?

3. By the action of the heat & the
change of the atmosphere. Also
the heat alone makes the
filament a little more and a little
less. The action of the heat is
analogous to the action of the sun in
the drying of the hair.

4. ~~The filament~~ The filament is
very soft & pliable at
first -

5. Yes.

6. How can you explain the
change of shape?

of the ...

1. In the ...
the ... of ...
... as ...

2. In what does his process consist?

1. In adapting the exterior of a
... to the Tubular

... it ... and
... is ...

... the ...
... that purpose. ...

the empty part of this Bottle

is ... which is

... more plunged in the

... of a ... Bottle. ...

... the Bottle may ...

... precautions; ...

... to ...

... to ...

the following things are
the same as the others.

1. The most pure and
correct form of the
language is the one
which is the most
correct.

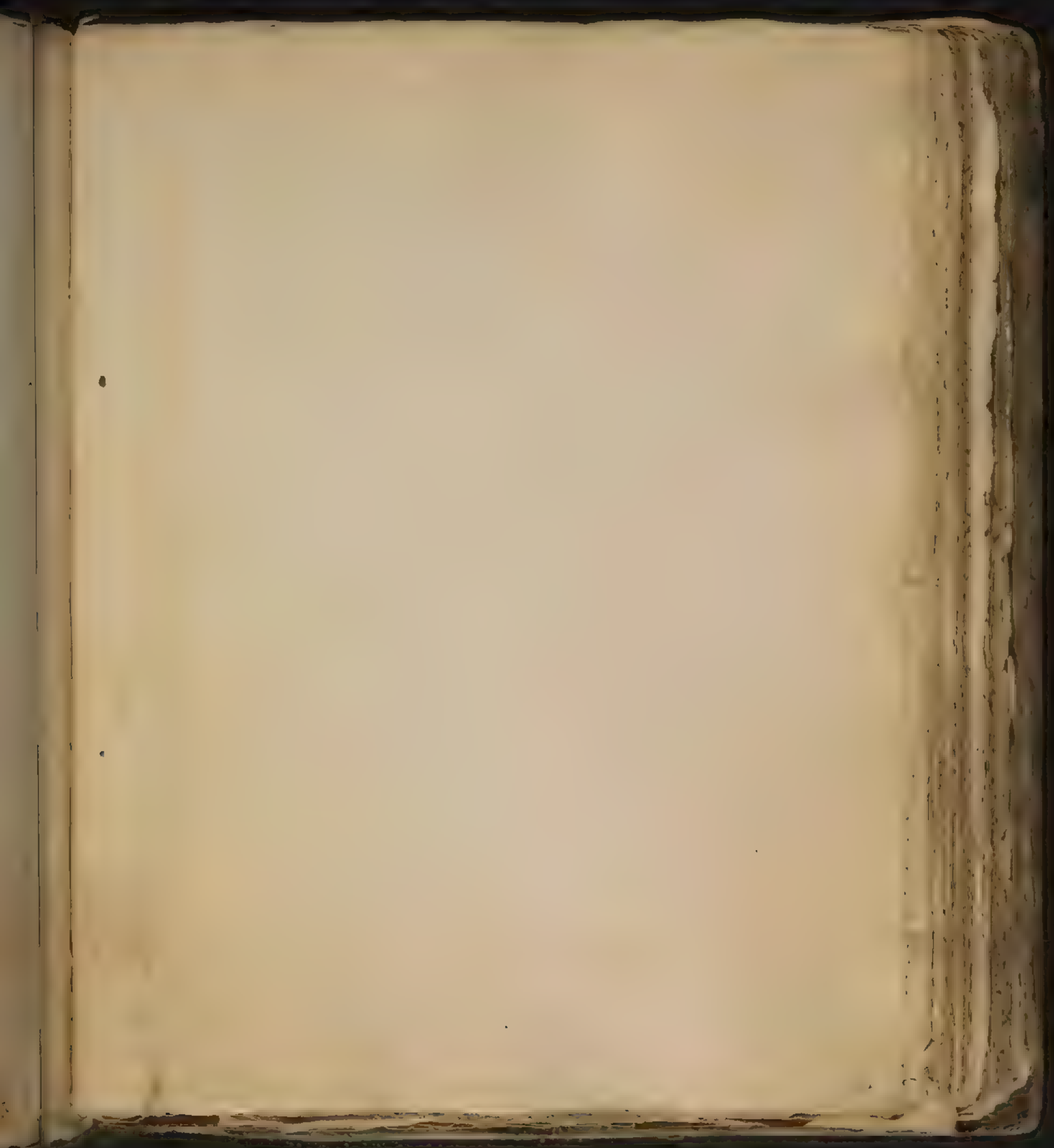
2. The most
correct form of the
language is the one
which is the most
correct.

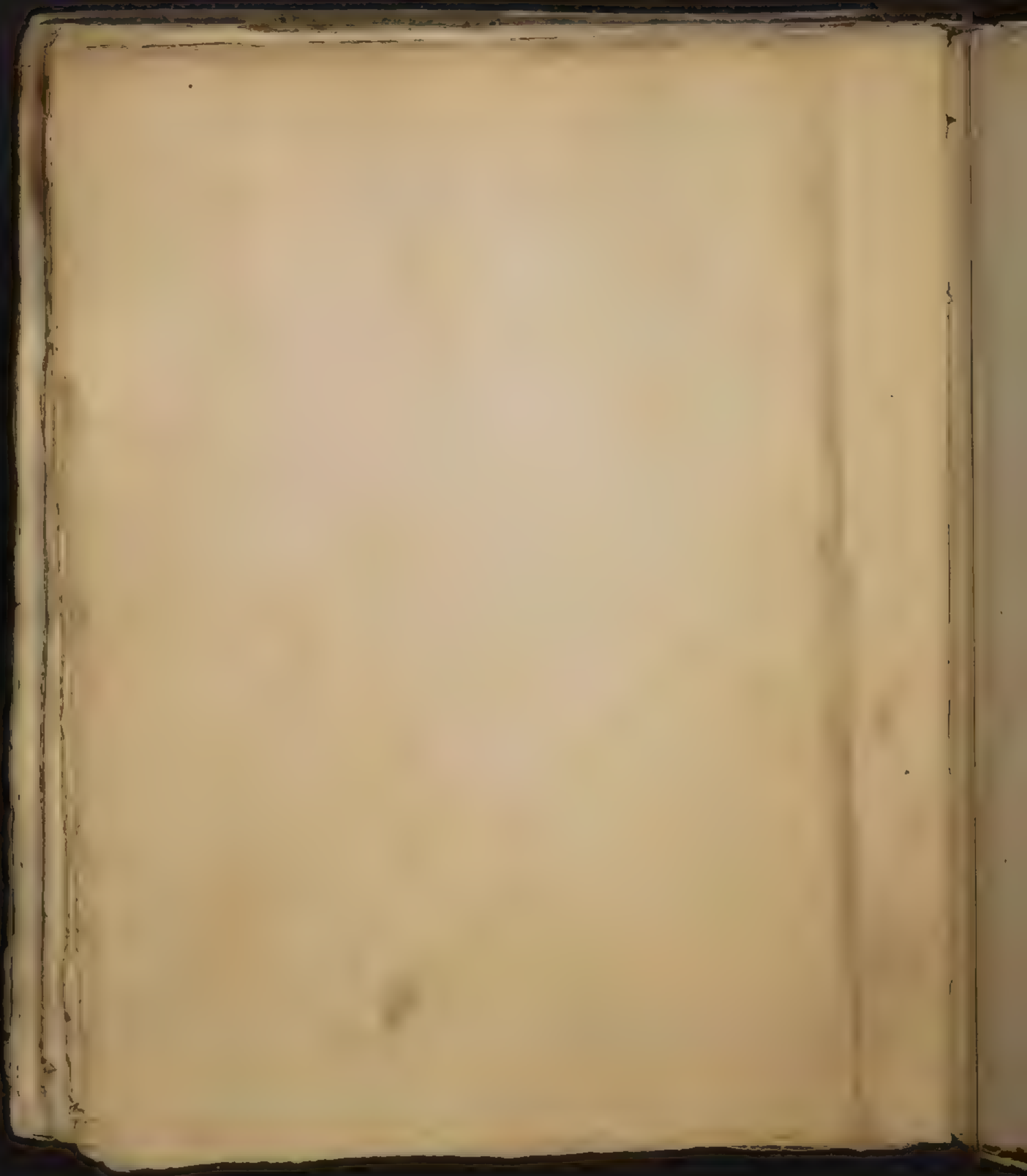
3. The most
correct form of the
language is the one
which is the most
correct.

injection is made into the
muscles of the arm, and the
serum, to which is added
a small quantity of water,
is allowed to remain in the
muscle for several weeks, above the head of
the arm. —

2. That in the use of this injection
it is that the diluted vaccine of
the vaccine and water is
deposited in the arm, the external
surface of the arm is then
to establish the vaccination
and water is applied to the
arm to the arm. —







2. ... with ... in the
... of 1725 ... it
... ..
... .. is it no

... ..
... ..
... ..
... ..
... ..

... ..
... ..
... ..
... ..

Does not ...
... ..
... ..
... ..

0. 2. 4. 6. 8. 10. 12. 14. 16. 18. 20. 22. 24. 26. 28. 30. 32. 34. 36. 38. 40. 42. 44. 46. 48. 50. 52. 54. 56. 58. 60. 62. 64. 66. 68. 70. 72. 74. 76. 78. 80. 82. 84. 86. 88. 90. 92. 94. 96. 98. 100.

1871

1. The first part of the document is a list of names and dates, which appears to be a record of some kind. The names are written in a cursive script, and the dates are in a more formal, printed style. The list is organized into two columns, with names on the left and dates on the right. The names are: John Smith, James Brown, William Jones, and Thomas White. The dates are: 1810, 1811, 1812, and 1813. The list is followed by a signature, which appears to be "John Smith".

2. ...
... ..

1872

Es ist ein Imp. am 10. 11. 1871

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some minor discoloration and dark smudges, particularly along the bottom edge where there is a prominent dark horizontal band. The overall tone is warm and off-white.

The first of the
of the

The
... ..
... ..
... ..

What does
... ..
... ..
... ..

... ..
... ..
... ..

... ..
... ..

... ..
... ..

1815

I have not been able to find any
of the birds to the species
The plumage is not
at all, by the description of
a species of bird.

I have not the time to find
the true species of the bird
which is not a bird. A. J. C.

I have not been able to find any
specimens of the bird. A. J. C.

I have not been able to find any
specimens of the bird. A. J. C.

A. J. C.

The following facts were discovered
on the 17th of July 1888,
at the site of the old
mine; a small section of
the old mine, which was found about
four miles from the mine, and was
supposed to be very rich, and
a small piece of the mine of
the old mine was found
and was very rich in the
mine. The mine was
discovered by the old mine
mine the old mine, and
the mine to be the old mine
mine the old mine
was a small mine
mine. I found the mine
mine of the old mine
mine of the old mine

Common in the ...

... of ... ?

... place, ...

... & ...

... is ...

... is the ... ?

... the ...

... the ...

... the ...

... a ...

... the ...

... the ...

2. I have been examining
these principles, but I have
constructed an instrument, to
determine the height of a mountain
by the degree of elevation of
the shadow of a long pole.

The other day, I was in Samanoy
where I saw other mountains with
peaks of snow upon the peak
of a temple; this I saw. I have
has confirmed these mountains
in the mountains of Sumatra.

2. Does not the heat of the sun
raise water in the form of vapor?

A. There remain a certain time
in the atmosphere, and after
wards fall in the form of
rain.

Sept 16

Left for the mountains in the morning
and after a short ride we reached the
mountain top at 10 o'clock.

The view from the top was
very fine and we saw the

valley below us. The mountains
were very high and the

climate was very cool. We
stayed at the mountain house

and had a very good dinner.
The mountains were very

beautiful and the view was
very fine. We saw the

valley below us. The mountains
were very high and the

2. The first of the ...
the ...
the ...
the ...
the ...
the ...
the ...
the ...

the ...
the ...
the ...
the ...
the ...
the ...
the ...
the ...

2. What ...
the ...
the ...
the ...
the ...
the ...
the ...
the ...

Value: 16 A.

... 1890 ... 20

The first of these is the
 fact that the
 second of these is the
 fact that the
 third of these is the
 fact that the

1. The water is converted into the
ice, and it is a fact that
the ice then becomes oxidized, and
the gas is then released.

Received of Mr. J. M. Smith
the sum of \$100.00

Chambers

171
A. L.
... ..
... ..
... ..

... ..
... ..
... ..
... ..
... ..

... ..
... ..
... ..
... ..
... ..

... ..
... ..
... ..
... ..
... ..

Concerning the
... ..
... ..
... ..
... ..

the number of people who
the largest class of them
1. I met the Minister of the
Government here in a station
at the end of the line of the
road in the town of Moscow.
2. What is the object of the
visit? Is it to see the
city and the people?
3. We met the Minister of the
Interior at the station.
4. He is a very interesting man.
5. He is a very interesting man.
6. He is a very interesting man.
7. He is a very interesting man.
8. He is a very interesting man.
9. He is a very interesting man.
10. He is a very interesting man.

01. 6. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

• 12. 12. 12.

2. $\frac{1}{2} + \frac{1}{3} = \frac{5}{6}$ at 3.

Ed. by the author of "The

Common in the

in Powder

2000

1870

1870

1870

11

... of ...
... of the ...
... the ...

that of the ...

... the Nitrogen and Hydrogen ...
of ...

Concerning ...
Acids -

...
...
...

I have been thinking of you
very much lately and wondering
how you are getting on.

I hope you are well and happy
the first of the year
I am well and hope
you are the same.

I have been thinking of you
very much lately and wondering
how you are getting on.

I hope you are well and happy
the first of the year
I am well and hope
you are the same.

I have been thinking of you
very much lately and wondering
how you are getting on.

I hope you are well and happy
the first of the year
I am well and hope
you are the same.

I have been thinking of you
very much lately and wondering
how you are getting on.

[Faint, illegible handwriting on a single page of aged paper. The text appears to be a list or a series of entries, but the characters are too faded to transcribe accurately.]

[Faint, illegible handwriting on the right edge of the page, likely from the adjacent page. Visible fragments include:]
...the
...a v
...Coll
...d. o
...an
...of to
the
...
...of
it
...d.
had
...
...
as
...
...
...
...

2. When the Carbonic Acid exists in a state of Gas how is it Collected?

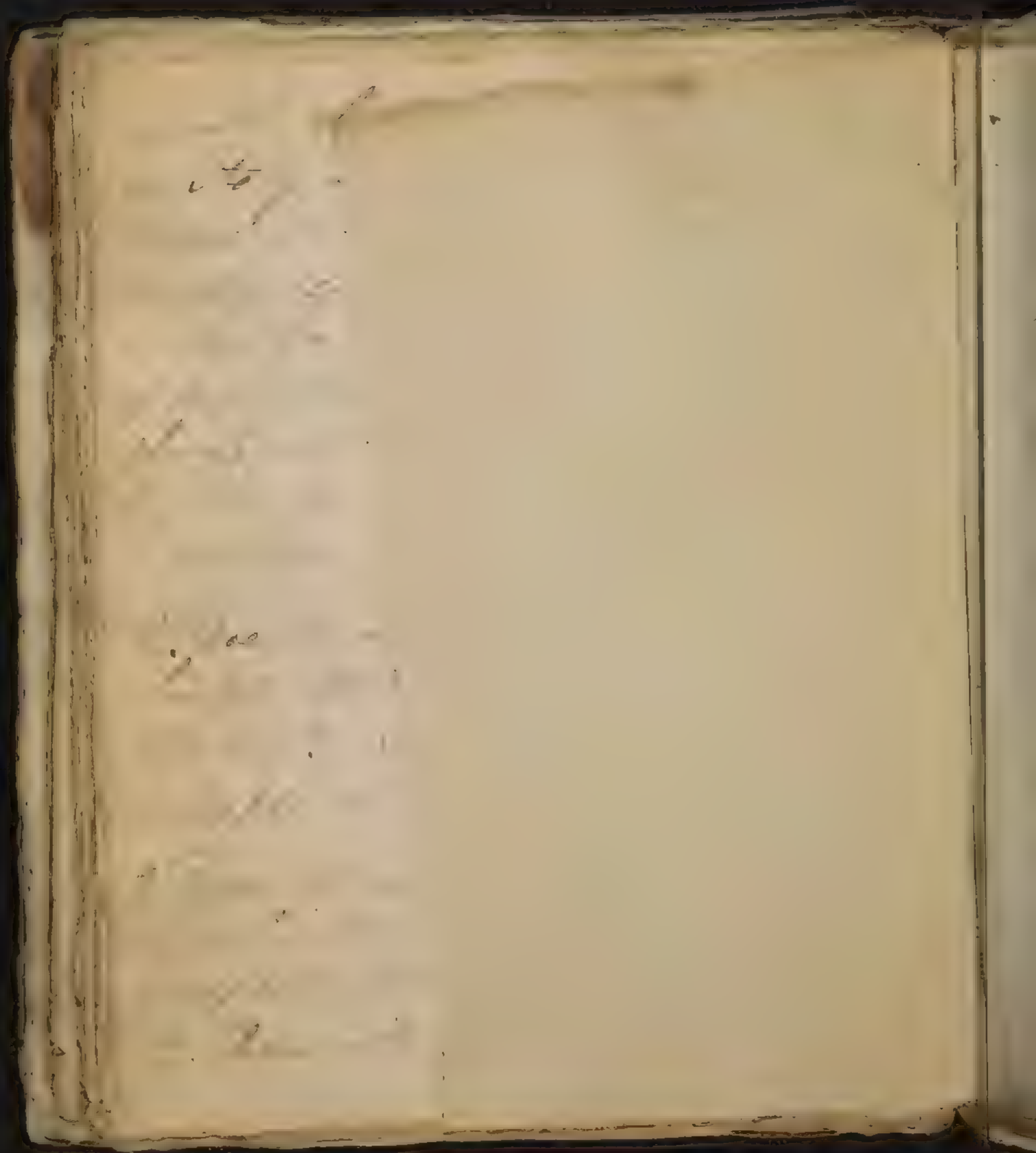
1. By filling a Bottle wth Water and emptying it in the atmosphere of this Gas. the Acid takes the place of the water and the Bottle is afterwards corked to retain it.

2. When it exists in a state of combination how may it be extracted.

1. By Distillation wth strong heat —

2. When it exists in the state of Simple Mixture as in Water — Where be

1. By Agitation of the Liquid in which it is contained —



1891

1870

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf from an old book. The paper has a slightly textured appearance with visible foxing and small dark spots, characteristic of old paper. There is no text or other markings on the page.

[illegible]

Handwritten text, possibly a list or account, in a cursive script. The text is faint and difficult to decipher, but appears to be organized into several lines.

Handwritten text, possibly a signature or a heading, in a cursive script. The text is faint and difficult to decipher.

Handwritten text, possibly a list or account, in a cursive script. The text is faint and difficult to decipher, but appears to be organized into several lines.

27
The first of the
year is almost
over. The
winter has been
very severe and
the crops are
all killed.

The
winter has been
very severe and
the crops are
all killed.
The
winter has been
very severe and
the crops are
all killed.
The
winter has been
very severe and
the crops are
all killed.

... of ...
... of ...
... of ...
... of ...
... of ...

... of ...
... of ...
... of ...
... of ...
... of ...

The first of these is the
 fact that the number of
 cases of the disease is
 increasing. This is due to
 the fact that the disease
 is becoming more common
 in the population. This is
 due to the fact that the
 disease is becoming more
 common in the population.
 The second of these is the
 fact that the disease is
 becoming more common in
 the population. This is due
 to the fact that the disease
 is becoming more common
 in the population. This is
 due to the fact that the
 disease is becoming more
 common in the population.
 The third of these is the
 fact that the disease is
 becoming more common in
 the population. This is due
 to the fact that the disease
 is becoming more common
 in the population. This is
 due to the fact that the
 disease is becoming more
 common in the population.

18

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some faint smudges and discoloration, characteristic of old paper. There is no text or other markings on the page.

2000

a first set of

liberals

2.

the

the

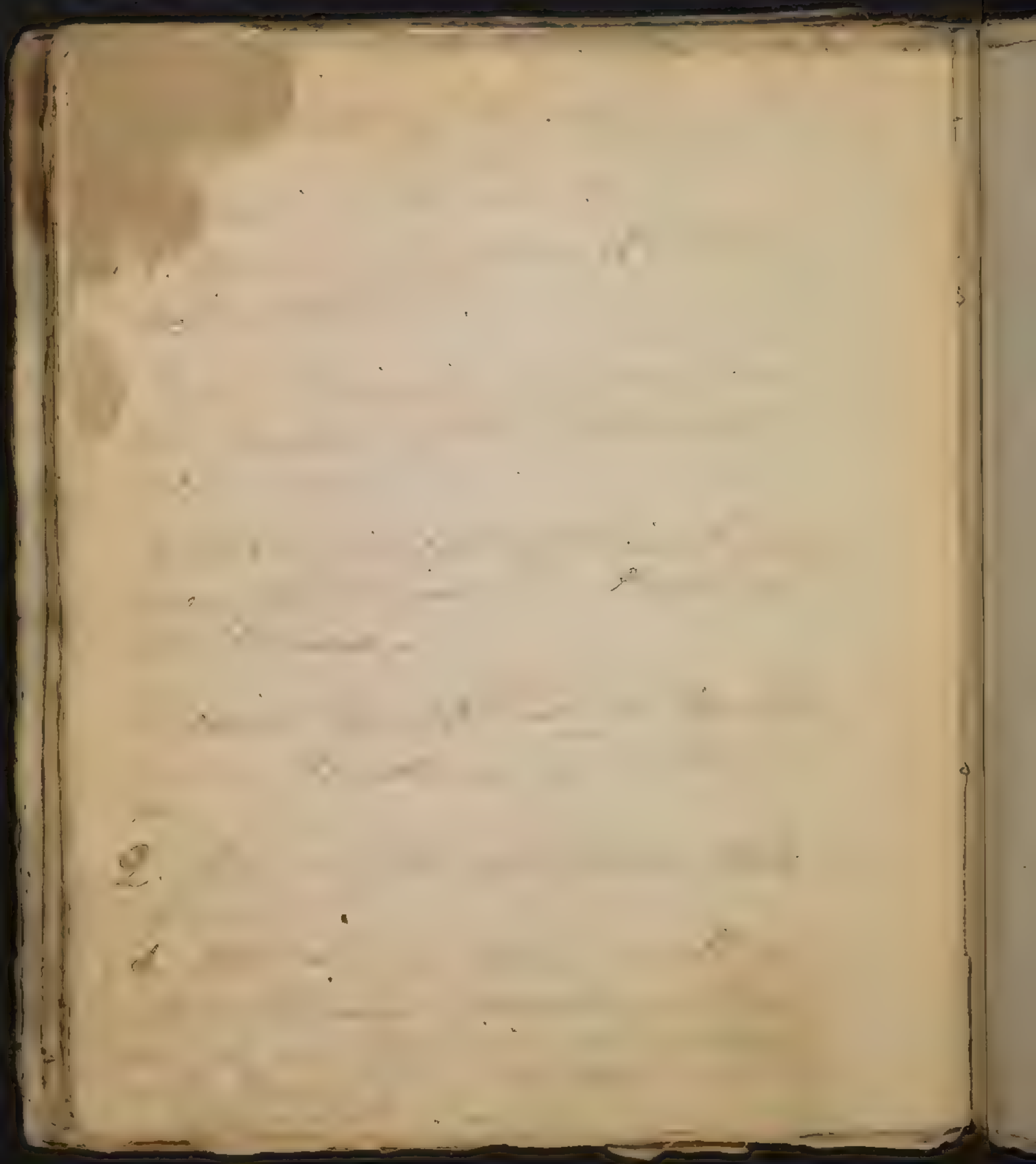
the

the

the

the

[Faint, illegible handwritten text, possibly bleed-through from the reverse side of the page.]



1845
Jan 1st
Feb 1st
Mar 1st
Apr 1st
May 1st
Jun 1st
Jul 1st
Aug 1st
Sep 1st
Oct 1st
Nov 1st
Dec 1st

[Faint, illegible handwritten text, likely bleed-through from the reverse side of the page.]

The ... of ...
... ..
... ..
... ..

... ..
18
... ..
... ..

... ..
... ..
... ..
... ..
... ..

... ..
... ..

[Faint, illegible handwritten text, likely bleed-through from the reverse side of the page.]

... ..

1.

... ..

... ..

... .. from Soil.

... ..
... ..
... .. Plants.

... ..
... .. the
... ..
... ..

The latter part of
process is not accurate.

2.
... ..
... ..

1890. 10. 10

1870

9

1872

[Faint handwritten notes at the bottom of the page]

1. *... ..*
2. *... ..*
3. *... ..*
4. *... ..*
5. *... ..*
6. *... ..*
7. *... ..*
8. *... ..*
9. *... ..*
10. *... ..*

favor

This image shows a blank, aged, cream-colored page, likely an endpaper or flyleaf of a book. The paper has a slightly textured appearance with some faint smudges and discoloration, characteristic of old paper. There is no text or other markings on the page.

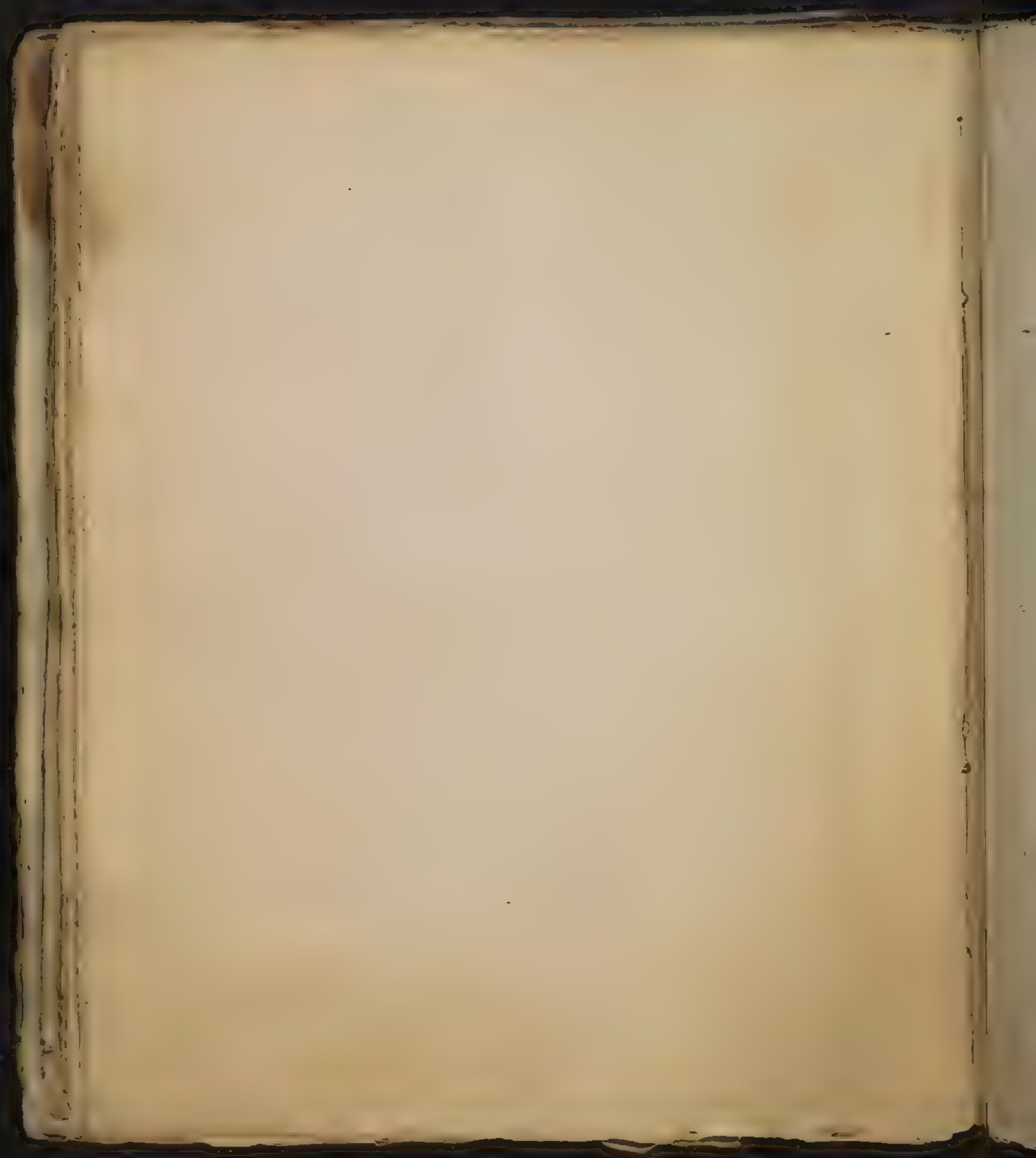
18

1. From the
in

1. It enters into the
of
... ..
... ..

2. The
it
... ..
... ..
... ..
... ..
... ..

Orate of



[illegible]

Part III

N^o 1

Concerning Metallic Substances.

Introduction.

How are metallic Substances distinguished from all the other combinations I am to observe? —

A. By a much greater gravity and a degree of Brilliance peculiar to bodies of this kind. —

1. One of the most distinctive Characters of Metals is their gravity —

2. They are Lucid

A. I. — Does not a thin covering of fine Silver or Gold on the surface of a Glass form a Mirror or Looking Glass — well polished Steel forms the Mirror of Telescope. —

2. How do you examine Minerals or Spas? —

A. By Pounding and transferring them in Crucibles.

3. Arsenic and Nitru, in equal parts,
form likewise a very active flux -
2. In How many states is the Mineral
found?

A. Three - 1 In the form of a native
Metal - 2 In the form of
Calx or oxide - 3rd Combined
with Sulphur or Arsenic.

2. Do not most Metals kept in an
State of fusion, lose their metallic
brilliance, and become?

A. Yes and become converted into
an opaque powder called Oxide -
or Metallic Calx -

3. Do not Metals oxidized in an
Atmosphere of oxygen Gas absorb
it to the last drop - A, Yes -

2. How are Metals to be distinguished
A. Into those that are ductile
and those that do not possess
that property - The Name of
Metal has been applied to
the former and that of
Semi-metal to the latter -

Arsenic

Is a Semi-metal of a glittering
Whiteness - of a somewhat vitreous
appearance, exciting an impression
of an acid taste on the Tongue.

Arsenic is found in friable
lumps possessing scarcely any
Consistence - It comes from
Prukenia obscurus &c -

It emits on burning a very
evident Smell of Garlic -

2. When the oxide of Arsenic
Combines with Sulphur what
is the Result? -

A. Either Orpiment or Realgar.

Realgar is Common in China
and is made into Vases - Pagods,
&c. -

Mr. Macquer has given us two
processes to obtain this Arsenical
acid -

Arsenic is used by the Dyers -

Orpiment & Realgar very much used
by Painters -

2. What is a direct Counterpoison

A. Mr. Navier proposed one dram
of Sulphur of Pot. ash or Liver of Sulphur
to be dissolved in a pint of Water.
which the Patient is directed to drink

No 2

Concerning Salt.

A Luminetal. in blow by Antists
to give a Blue colour to glass
No. — it is of a light grey color,
compact and brittle. The Nitric
acid dissolves it with effervescence

Concern Nickel

Konckel considered it as a species
of cobalt, or arsenic mixed with
Copper —

The Muriatic acid dissolves Nickel

Bismuth or Tin glass —

A Luminetal of a yellowish white
it ^{has} some analogy with Lead — found
in Saxony —

The various Solutions of white
of Bismuth forms Sympathetic
Inks —

Antimony

Is a Semi-metal —

2. Has not this Substance singularly
engaged the Attention of Chemists?

(A. Yes, they considered it as the
basis of their great Stone
and is described in their Writings
under the Name of the Radical
Principle of Metals, Mixed Lead &c.

2. In Common State is it found
in the Bowels of the Earth?

- (A. 4. 1 In y^e metallic form
2 Combined with Arsenic
3 Mineralized with Sulphur
4. In the State of Oxide.

As Antimony has been found in
several parts of France —

Antimoniated Tartrate of Potash
form^d of the Acid of Tartar and
Antimony—

Q. What is the most accurate process
for making an excellent emetic?

A. It consists in taking very fine
Transharoun Glass of Antimony
grinding it fine, and boiling it
in Water, with an equal weight of
Cream of Tartar, untill the Salt
is saturated. — By filtration, and
evaporation with a gentle heat, and
subsequent Repose, Crytals of the
Antimoniated Tartrate of Potash are
obtained — whose degree of Emetic
appears to be sufficiently Constant.

Q. What decomposes the Alkali on
Lime? Is the Antimoniated Tartrate
of Potash —

2. What forms the Remedy Mineral?
A. Antimony dissolved in the Sulphur
of H₂S.

Crucifying Zinc.

Is a metallic substance of a
blueish greyish white color.

Zinc is an intermediate substance
between Semimetals and Metals.

Sulphate of Zinc: or white Vitriol.

~~and~~ 2. What forms Lapis Lazuli?
A. It is an Oxide of Zinc.

2. What is meant by the Power of Zinc?
A. The sublimed oxide of Zinc.
a Powerful Antispasmodic

It may be administered in pills
in the dose of one grain.

D. Moreau has substituted the precipitate
of Zinc to white Lead to great advantage.

3

Concerning Manganese

A Mineral of a grey or blackish color, soiling the fingers and used in Glass Houses under the Name of Soap of the Glass-makers -

The oxides of Manganese afford a great Quantity of oxygenous Gas. —

Q. Does not the Muriatic Acid dissolve Manganese?

A. Yes, but when it is digested upon the oxide it seizes the oxygen, and escapes in Vapour thro' the Water - This Vapour is known by the Name of oxygenated Muriatic Acid.

The Muriatic Acid dissolves Manganese -

Manganese is used to color Glass and Porcelain of a Violet colour. —

Concerning Lead

Lead is the softest, the least tenacious,
the least fusible, the least elastic
and one of the most ponderous
of Metals —

1 White Lead ore

Green Lead ore

Black ore of Lead —

Red Lead — found in Siberia
We have considered this lead
ore as a variety of the preceding
Species Coloured by Iron —

2. How is the Silver disengaged which
the Lead may contain —

1. It is carried to the refining
furnace; where by the united
Energy of the fire, and the wind of
Bellows directed upon the matter, and
the Metal is converted into a white
scaly oxide called Litharge. —

acid and Alkali decompose it.

The acetous Acid combines Lead
and affords a white oxide by the
name of white Lead. —

The Solution of Acetat. of Lead ~~and~~
~~and~~ Concentrated ~~and~~ Purely Concentrated
 Crystallizes in a fluorescent tetrahe-
 dral prism; and forms the Salt
 of Saturn, or Sugar of Lead. —

Lead ore is used to Glass Pottery.

Concerning Him.

It is a metal of a white color
intermediate between that of lead
and silver.

1, Pure Tin, Such as that of Malacca,
Banco, and the Soft Tin of England. —

When the seed is white, it is then
called Putty -

The Drop of am may be made good
by heating it in contact with
Charcoal. —

The oxigenated Muriatic Acid dissolves
 am speedily;

The gumming Liquor of Sibavies
is said to be a Muriate of am . —

The Solution of am which constitutes
the Composition for Scarlet, is made
with the Common Aqua. fortis —
prepared with Salt-petre of the
first Boiling —

The Amalgam for electrical Machines
Composed of

2 parts of Mercury.
1 of Zinc
1 of Tin —

The Zinc and am to be fused, and
mixed with Mercury. The Mixture
agitated in a Wooden Jar.

To make a very fine Red precipi-
 -tate the Mercurial Solution
 must be put into a Retort and
 distilled until no more Vapor
 comes over. An additional
 quantity of Nitric Acid must
 then be poured on the Remains
 and also distilled after 3 or 4
 repeated Distillations a very
 beautiful precipitate is
 formed in small Crystals
 of a deep Red Colour.

The Solution of Mercurial
 Nitrate is ~~from~~ ^{from} mer-
 curial Water. it is of use to
 ascertain the presence of Sulphuric
 and Mineral Acids in Mineral
 Waters. The Acid, The Alkali
 The Earth and some Metals
 likewise precipitate Mercury from
 its Solution in the Nitric Acid.

of sulphuric acid in a quantity
 the precipitate is of a deep Red
 these & the other operations are of great
 consequence in the analysis of

by

Mercurius dulcis may likewise be
 Made by digesting the Mercurial
 Water ^{in a glass vessel} by a collection of the Aliments
 of Food. The white precipitate
 which is obtained may be sub-
 limed and forms an excellent
 Mercurius dulcis.

14. 5th Corrosive Mineral of
 Mercury is triturated in a
 Mortar to the state of running
 Mercury. When the Mercury
 has disappeared, the texture
 is put into Phials, and
 sealed, &c. successively times
 in order that the Combination
 may be more accurate.
 This Sublimation differs from the
 Corrosive sub. by its insolubility
 in Water, its impidity and the
 form of its Crystals. Whenever
 it is suspected that Mercurius dulcis
 still retains a portion of Corrosive

The ultimate nature of the substance is more important than the form of the crystals.

N^o 4

internally rubbed with chalk the
leaf is then to be reduced to a fine
Powder; and employed in that
State, or mixed with grease. —
~~The~~

The Amalgam of Tin is used
to silver looking Glasses. for
this purpose, a leaf of Tin is spread
out upon a Table of the size of the
Glass, Mercury is poured upon it,
and spread about with a Bruiser.
This being done, a large Quantity
of Mercury is poured upon the
Tin, so as to form a covering
of more than one line in
thickness. — The Glass is placed
upon this covering, by presenting
one of its Edges. — and
weight put on it. —

Concerning the Spathe Iron : or
or carbonates of Iron. —

Concerning the Bog Ore of Iron,
or
Lignellaceous Iron Ores.

(Art. V)

Prussiate of Iron
or
Native Prussian blue

(Art. VI)

Concerning Plumbago, or the Carbure
of Iron —

It is that Mining substance of
a blackish blue colour, which is used
to make the pencils called black
lead-pencil —

Plumbago is formed by the ligneous and
truly indecomposable part of the Wood
which resists the destructive action of
water in its Decomposition of Vegetable
Substances. —

Oxygen and Carbon exist in
Crude Iron -

Steel is a kind of Iron which
contains Carbon only -

If Coal Substances be combined
with Iron in a ductile State and
deprived of all foreign Matter,
the combination being effected
by a cementation or steaming, the
Iron will pass to the State of
Steel; and the Quality of this
Steel will vary according to
the proportions of Carbon.

1. How is Siderite obtained?

A. By Depositing Iron in
Nitric Acid

2. Of what does the Basis of Ink

Consist - A. A Solution of Iron by
the Gallic Acid. -

Iron, dissolved by the purpuric acid,
forms Prussian Blue, or the purpate
of Iron. —

1. How is the Purpuric acid obtained?
A. By treating Prussian Blue by
way of Distillation in the sulphuric
acid it permits a fluid to escape
that holds the purpuric acid in solution
it may be precipitated upon Iron. —

2. What substance has been as the
most accurate to ascertain the presence
of Iron in any mineral Water?

A The Purpate of Lime. —

Q. Does not the oxidation of Iron to
a rusted atmosphere rust it speedily
and cause it to pass to the state of
oxidative Sulphate & Mars. This pre-
-paration is a true Carbonate of Iron.

and Iron Water. —

Concerning Copper.

It is a reddish metal hard, elastic,
its taste & smell, as it is, nauseous.

It is found in various forms —
in the form of the Earth —

1 Natural Copper —

Sulphat of Copper is blue Vitriol —

The Acetic Acid gives it a greenish —

Vinegar distilled on a Campana or similar
Copper; which proves that it has
taken up oxygen.

The Acetic Acid, or Radical Vinegar
differs from ordinary Vinegar, as
containing a greater quantity of oxygen.

Concerning Mercury.

The
It differs from all other Metals,
by its property of "staining the
fluid State" at the ordinary tem-
perature of the Atmosphere.

Mr. Pallas found Mercury
in 1772 at Kasnjark, in the
Ural Mountains: he then found
it elsewhere of the same
it is common in soft Tin.

2 In how many States has
Mercury been found?
(A. In 12 gives

found in China -

Several found in Mercury
more found in a well at
Vienne in Dauphiny; -

Mercury is sometimes naturally
amalgamated with other Metals,
such as Gold, Silver, Arsenic, &c.
Sulphur -

Mercury is usually mineralized
by Sulphur; and the Product
is Cinnabar. -

Mercury is also found in water. -

Sulphuric acid acts very slightly
on Mercury

The yellow oxide obtained in excess
of the sulphuric acid, is known by
the Name of Amorphous Mineral.

Nitrate of Mercury is Corrosive —

The Mercurial Nitrate of Mercury
Heated in a Crucible, is fused,
and emits a considerable quantity
of nitrous gas together with its Water
of Crystallization. The remaining
Residue becomes yellow; and at length
assumes a lively Red colour, and
forms the Substance called Red
Precipitate. ~~It~~

2. Does not the Muriatic Acid com-
pletely dissolve the Mercurian oxide.
A. When

Q When Silver oxides are nearly in the metallic state, or charged with a small quantity of Oxygen, the Mineral of Mercury is formed.

When on the contrary, the oxide of Mercury is saturated with oxygen, the original & Mineral of Mercury, or Corrosive sublimate of Mercury, is formed.

2. What is the Method of making this Salt in the dry way?

A. Equal parts of dried Nitrates of Mercury, decripitated muriatic acid, and Sulphat of Iron calcined to whiteness, are mixed together. This Mixture being exposed to Sublimation the product which arises is a Corrosive sublimate.

Barytes, Magnesia, and Lime decompose this Salt.

29. Phlogogenic formed by Corrosive sublimate and Lime water.

The Corrosive Mineral of Mercury dissolves
therefore from the mild mineral of
Mercury by the States of its acid. —

Concerning Silver. —

Nitric Acid Dissolves Silver the Solution
then lets fall Crystals the Solution
of these Crystals generally known
by the Name of Solution of Silver
is very caustic. —

Concerning Gold. —

I found almost always in a Native
State and in Octahedrons in the
Gold Mines of Bolivia in Trampheim.

Platina

It has been found only in the Native
State — It has been found among the
auriferous Sands of South America.
Its form is that of small grains of a fine
white colour.

Vessels of Platina may be formed, by
filling Clay Moulds with the Alloy
of Platina and Arsenic:

Morveau fused Platina with his
Vitricous Flux, made of powdered
glass, Borax, and Charcoal —

On account of its Infusibility, it is very
useful for Crucibles —

Useful for Mirrors in Optical
Instrument.

Concern Tungsten

Is of an opaque white colour
very heavy, and of a moderate degree
of hardness — found in Mines in
Cornwall —

The white powder which is obtained
by decomposing the alkaline Solution
of Tungsten by an acid, is acid to the taste
also Tungsten Acid

Gene using Wölfram -
Is of a blackish brown colour.

Uolybdena
Is composed of scales, particles, slightly
different its aspect is bluish -

1. The ...
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... of the ...
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2. The ...
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... to be ...
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3. The ...
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1500 I

I have been thinking of you
and wondering how you are getting on.
I hope you are well and happy.
I am still in the same old place,
but I am doing as best I can.

Change.

III
The first of the three
is a... of the Bo...
... is ...
... of ...

Q. How is the affinity of the various
instances related to it?

A. Nature has simply created
the affinity and appointed to
each its relation with all
those that can be preserved to it.

Q. How is the affinity of the
various divided?

A. Into simple affinity, simple
affinity, the affinity of an
medium, reciprocal affinity.

Q. What is an example of simple
affinity?

A. The affinity of the
various parts of a plant.

1. The first part of the paper is
a description of the

the first part of the paper is
a description of the

the first part of the paper is
a description of the

the first part of the paper is
a description of the

the first part of the paper is
a description of the

Example - The subject of matter or
Vibrations matter is not Combustion - com-
posed of the same matter by time.
When either of the principles is present
presented; but, at the same time, the
matter is in the time, this state
of time will decompose the subject
of matter. In this last case the affinity
of the principle with the
matter is weakened. As matter
is in time - this is therefore is
subject to two attractions: the one
which retains it to the matter
which attracts it towards
the time - Newton has called the
attraction of time, and the
attraction of matter.
This is the nature of an
- medium?
Bodies which have a
affinity to each other, or in a
medium?

To unite by the intervention of a third -

Exam - An Alkali is the intermediate
of union between Oil and Water: see
the Essay on Acquisitions, Markings &c. -

^{VII}
L. The particles which are brought together
in virtue of affinity, whether they
be of the same nature or of different
natures, continually tend to form
Bodies of a spherical, constant, &
indefinite form. -

L. 1st Gen.

1. The first matter to be
considered is the nature of the

2. The second is the nature of the
most complete state of division,
3. The third is the Division to be effected:

4. The fourth is the nature of the
5. The fifth is the nature of the
6. The sixth is the nature of the

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A. in ...

2.
18. By ...

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Can be met by the ...
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Considerable quantity.

18. 18. 18.

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[Faint handwritten notes at the bottom of the page]

What is this?

of the ... to balance
the ... natural effect
of attraction. —

2 What could have ... the
earliest idea of it?

1. The shock of two ...
the action of ...
etc. —

Constant Caloric & Heat. —

2. In what is Caloric contained?

1. It is contained in greater or
less quantities in ...
to the greater or less degree of
agitation existing between it
and ... —

The higher

... the ... in proportion to the heat

2. In a state of rest, or in a state of motion, in the case of

d. In a state of rest, or in a state of motion, in the case of
of combustion, in the case of
any endeavour to obtain an equilibrium
and is supposed to be according to the
degree of affinity, and is conducted by this class
and is supposed to be equal facility

Wood receive it to the degree of combustion

To Calculate the heat from living bodies
or determine with precision the $\frac{1}{100}$ per line
of any substance. Messrs De la place and Lavoisier
have invented an apparatus. It is constructed
on the principle that all the heat communicated
to it is communicated to the whole is fused -

It consists of 3 Circular Vessel, nearly
inscribed in each other; so that three capacities are
produced - The interior Capacity is formed by an Iron
Grating upon Supports of the same Metal - Then
it is the Bodies subjected to experiment are
placed - The upper part is closed by a Cover -
The middle space next this contains the Ice
is supported by a grate covered with a
cloth - as the Ice melts the Water & runs
thru the Grate and the lower and is collected
in a Vessel placed beneath - The bottom
Compartment contains Ice intended to prevent
the escape of latent heat of the vessel

1. The first principle of the
... is that the ... of the ...
... is the ... of the ...
... is the ... of the ...
... is the ... of the ...

2. The second principle of the ...
... is that the ... of the ...
... is the ... of the ...
... is the ... of the ...

3. The third principle of the ...
... is that the ... of the ...
... is the ... of the ...
... is the ... of the ...

4. The fourth principle of the ...
... is that the ... of the ...
... is the ... of the ...
... is the ... of the ...

5. How is it constituted?
A. When the principle, that the ...
... is the ... of the ...

1. The first of the ...
2. The second of the ...
3. The third of the ...
4. The fourth of the ...
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11. The eleventh of the ...
12. The twelfth of the ...
13. The thirteenth of the ...
14. The fourteenth of the ...
15. The fifteenth of the ...
16. The sixteenth of the ...
17. The seventeenth of the ...
18. The eighteenth of the ...
19. The nineteenth of the ...
20. The twentieth of the ...

1. I have not found any fragments of
any other kind of bones or
of other animals in the strata?
of the same nature as the
above - but a few fragments of
bones of the same kind will be
found in the strata.

2. I have not found any
of the same kind.

3. I have not found any
of the same kind - but a few
fragments of the same kind
will be found in the strata.

4. I have not found any
of the same kind - but a few
fragments of the same kind
will be found in the strata.

1. The rate is a for the first
to last very much the same.
and right at the 100 degree, as is no
constant of the same day, & out the
year 100 times with the same.

2. It is not well known that if
the heat of a thermometer be made
to be 100 degrees and kept moist
for 100 hours with 100, with the
invention the first 100 of 100
in the air? the thermometer will be
said to 0. — 100. 100.

3. It is not known how far
the heat of the thermometer will be
100 degrees? — 100. 100.

4. The expansion is increased by the
expansion of the air is not the same
100 degrees? — 100. 100.

1. To read 1 a and a in the text
of the 1st and 2nd verses,
of the 1st.

2. To read 1 a and a in the text
of the 1st and 2nd verses,
of the 1st.

3. To read 1 a and a in the text
of the 1st and 2nd verses,
of the 1st.

4. To read 1 a and a in the text
of the 1st and 2nd verses,
of the 1st.

The first part of the paper
 is devoted to a discussion of the
 various methods of determining
 the elastic properties of
 materials. It is shown that the
 most accurate method is that of
 measuring the change in length
 of a wire under a known load.

For the purpose of this experiment
 the change in length is measured
 by means of a microscope. The
 elasticity of a material is defined
 as the ratio of the stress to the
 strain. In this case the stress is
 the weight applied and the strain
 is the change in length.

The results of the experiment
 show that the elasticity of
 the material is directly proportional
 to the weight applied.

The following table gives the
 results of the experiment. The
 first column gives the weight
 applied and the second column
 gives the change in length.

of the ...
... ..

2. In ... place ...
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Q. Did you see any other persons
at the house on the 1st of Nov. except
a black woman?

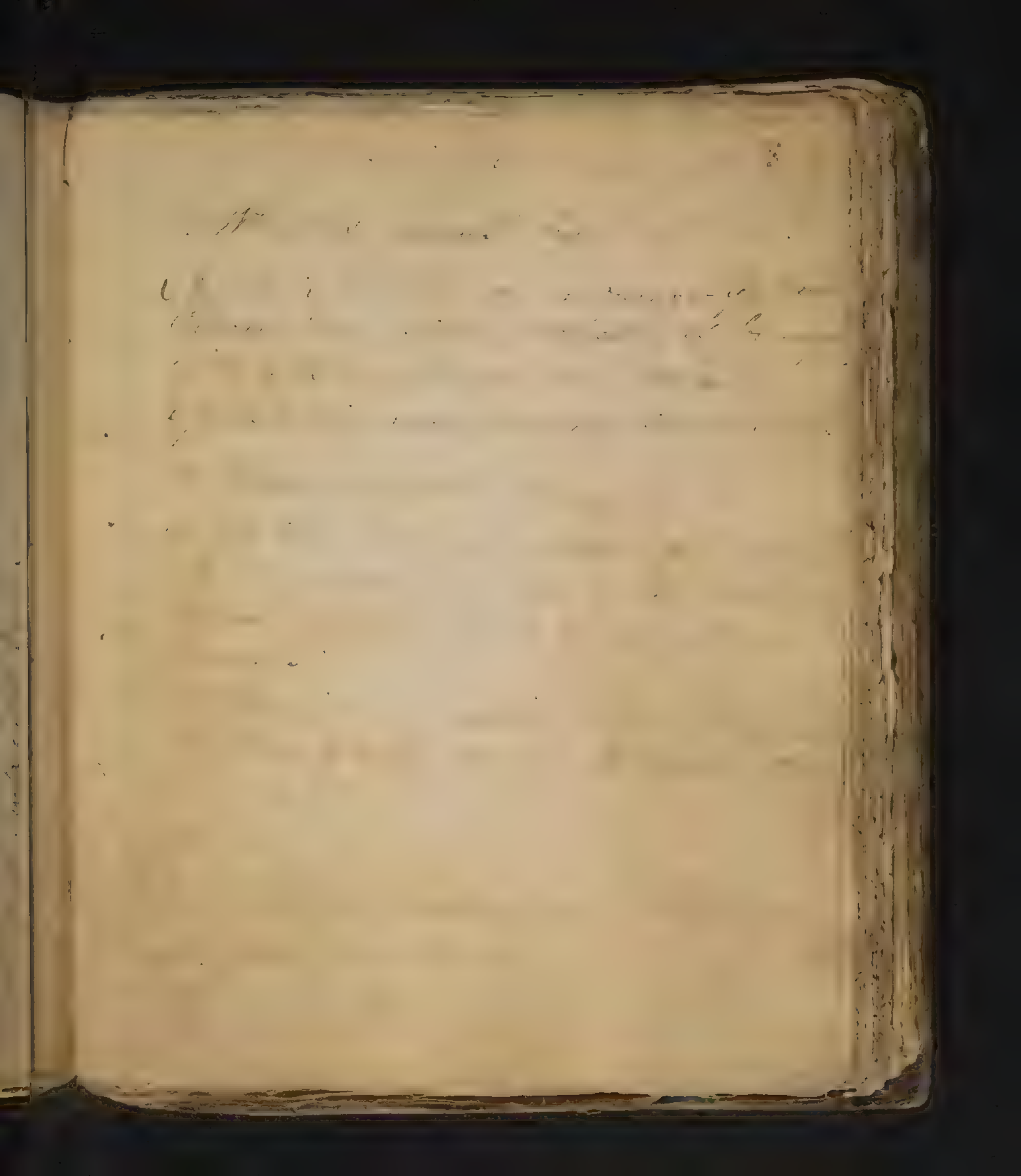
A. I did not see any other persons
except a black woman, a white woman
and a white man.

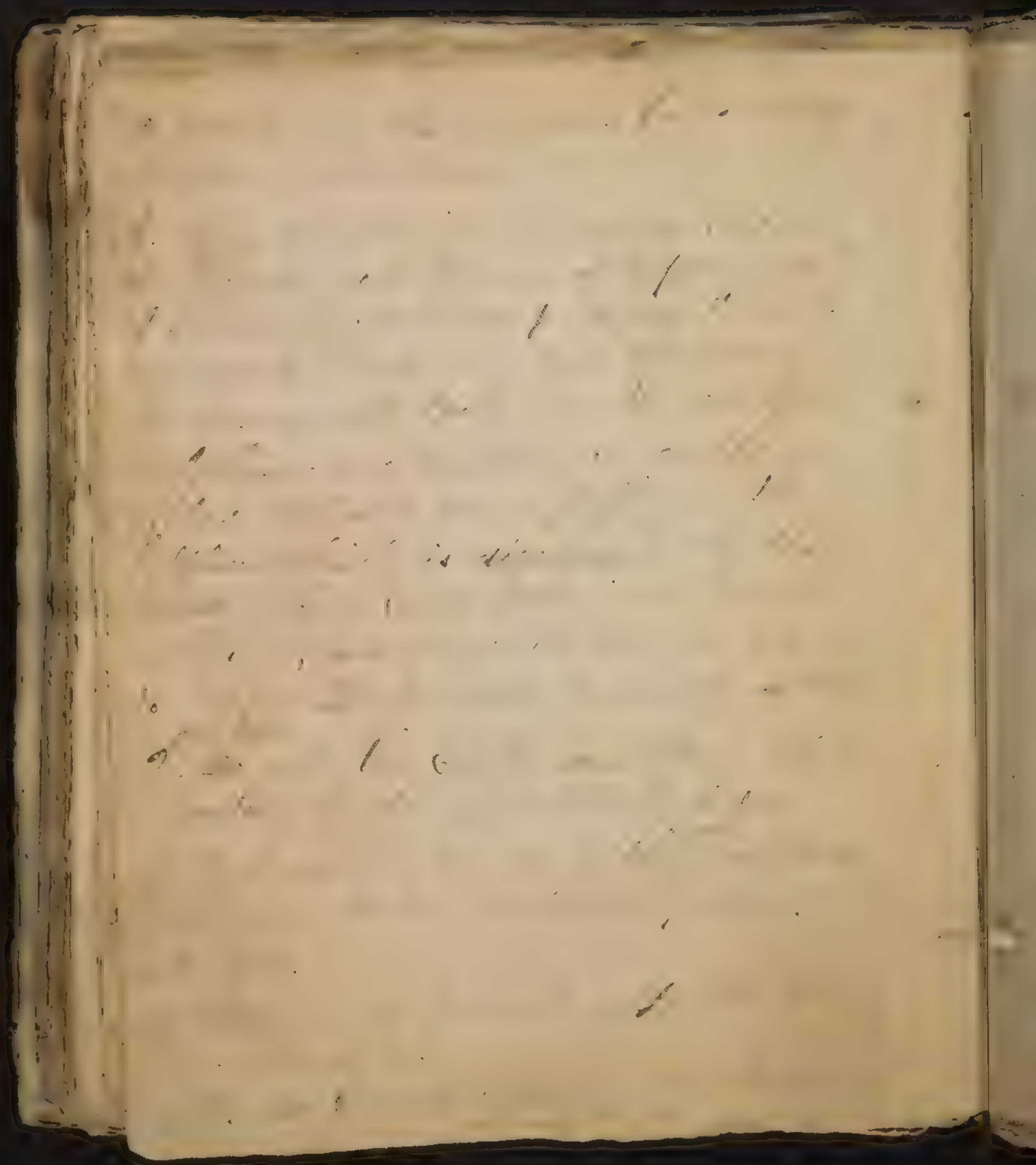
Q. Did you see any other persons
at the house on the 1st of Nov. except
a black woman, a white woman and a white man?

A. Yes, I saw a white woman
and a white man, and a black woman.
Q. Did you see any other persons
at the house on the 1st of Nov. except
a black woman, a white woman and a white man?

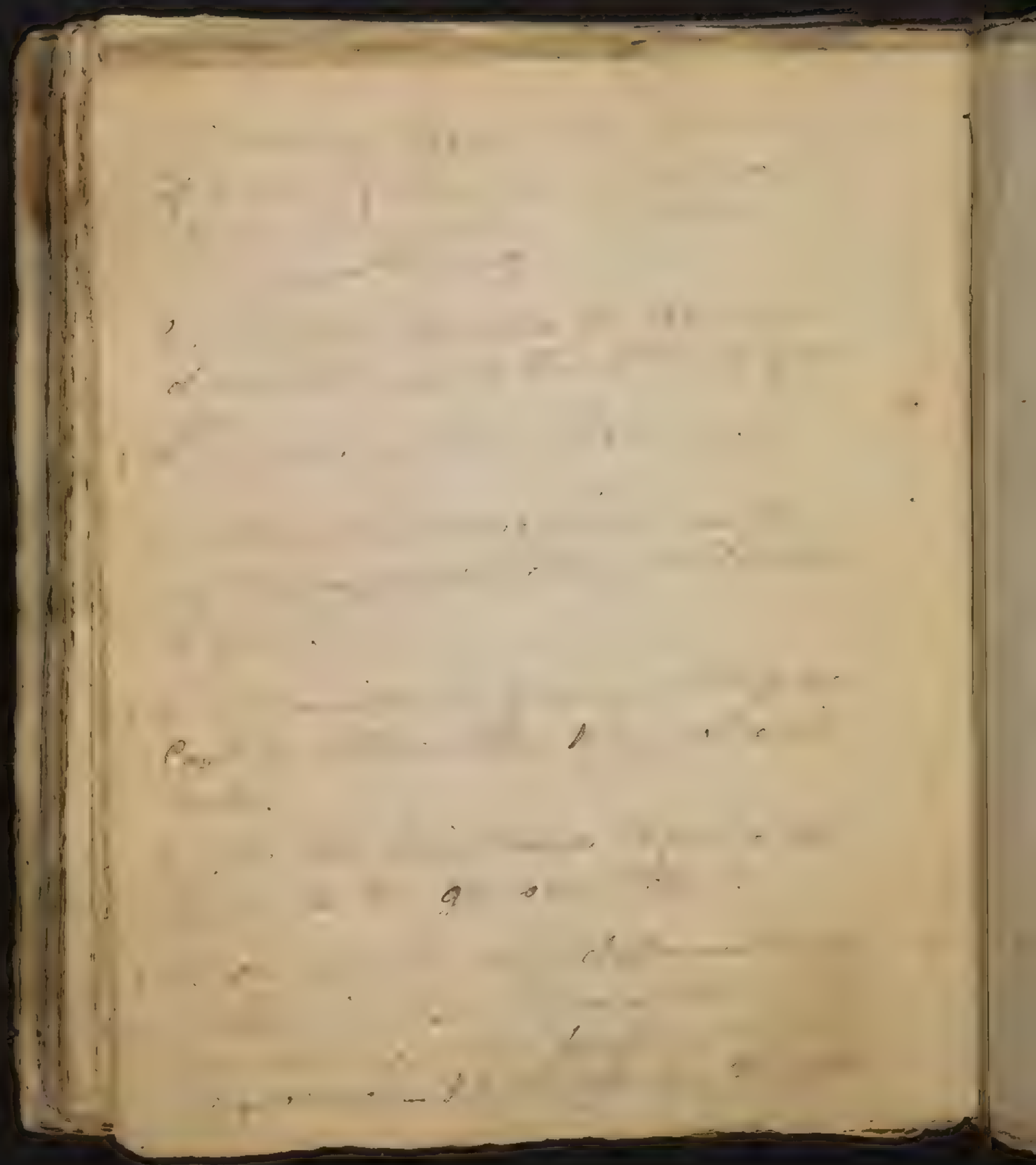
A. Yes, I saw a white woman
and a white man, and a black woman.
Q. Did you see any other persons
at the house on the 1st of Nov. except
a black woman, a white woman and a white man?

A. Yes, I saw a white woman
and a white man, and a black woman.
Q. Did you see any other persons
at the house on the 1st of Nov. except
a black woman, a white woman and a white man?





when it is required to procure Carine in a
state of purity it must be in
close contact with the interior.



Handwritten text, likely a letter or document, written in cursive script. The text is heavily faded and illegible due to the age and condition of the paper. The writing is arranged in several lines across the page.

My dear Mother
I have just received your letter
of the 10th inst. and was
glad to hear from you.
I am well and hope this
letter finds you the same.
I have been thinking of you
very much lately and
wondering how you are
getting on. I hope you
are as well as ever.
I have been very busy
lately but I will try to
write you more often.
I love you very much
and hope you love me
as much as I do.
I am your affectionate
son
John

9

10

9

My dear Mother
I have just received your letter
of the 15th and was very glad to hear
from you. I am well and hope
this finds you the same. I have
not much news to write at present.
I am still in the same place and
doing the same work. I hope to
hear from you again soon.

Yours affectionately
John
P.S. I have just received your
letter of the 15th and was very glad
to hear from you. I am well and
hope this finds you the same. I
have not much news to write at
present. I am still in the same
place and doing the same work.
I hope to hear from you again soon.

1870

I, the undersigned, do hereby certify that the following is a true and correct copy of the original as the same appears in the records of the Court of Sessions for the County of New York.

1870. In the County of New York, in the Court of Sessions for the County of New York.

Do hereby certify that the following is a true and correct copy of the original as the same appears in the records of the Court of Sessions for the County of New York.

1870. In the County of New York, in the Court of Sessions for the County of New York.

Do hereby certify that the following is a true and correct copy of the original as the same appears in the records of the Court of Sessions for the County of New York.

1870. In the County of New York, in the Court of Sessions for the County of New York.

211.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

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of ... the ...
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14

1. The first thing I noticed
when I stepped out
of the house was the
familiar smell of the
ocean. It was a
comforting reminder of home.
The sun was shining
brightly, and the
birds were singing.
I felt a sense of peace
and tranquility.
The water was so
clear, and the sand was
so soft. I had never
before. It was a
new experience.
I had heard that the
beaches were beautiful,
and now I knew it was
true. The water was
perfect. I had found
what I needed.

~~Wednesday~~

Dear Sir

I have the honor to acknowledge the receipt of your letter of the 10th inst.

in relation to the matter of the

land in the name of the

estate of the late

John Doe, deceased.

I have the honor to inform you that the same has been

deposited in the office of the

Register of the County of

Albany, New York.

I am, Sir, very respectfully,

Your obedient servant,

J. B. Smith

Attorney at Law

I have received your letter
of the 10th inst. and am glad
to hear from you. I hope
you are well. The weather here
is very warm at present.
I am writing you a few lines
and hope they will find you
the same.

Your friend,
A. J. [illegible]

Mr. Ingenhousz has shown us the effect of light on the green plant.

[Faint, illegible handwriting]

2. *Chelodactylus* *Chelodactylus*

Dear Mr. [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]

I have the [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]

Yours [unclear] [unclear] [unclear]
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[unclear] [unclear] [unclear] [unclear]
[unclear] [unclear] [unclear] [unclear]

Yours [unclear] [unclear] [unclear]

[unclear] [unclear] [unclear] [unclear]

I have been thinking of you
very much lately & wondering
how you are getting on.

I hope you are well & happy
as usual. I have been very busy
lately but I shall try to write
you more often. I have been
thinking of you very much lately
and wondering how you are getting on.

I have been thinking of you
very much lately & wondering
how you are getting on. I hope
you are well & happy as usual.
I shall try to write you more
often. I have been thinking of
you very much lately and wondering
how you are getting on.

40

18. The day of the week is a day of the week.

2. The first of these is the fact
 that the number of the
 3. The second is the fact that the
 4. The third is the fact that the
 5. The fourth is the fact that the
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 81. The eightieth is the fact that the
 82. The eighty-first is the fact that the
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 88. The eighty-seventh is the fact that the
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 92. The ninety-first is the fact that the
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 111. The hundred-tenth is the fact that the
 112. The hundred-eleventh is the fact that the
 113. The hundred-twelfth is the fact that the
 114. The hundred-thirteenth is the fact that the
 115. The hundred-fourteenth is the fact that the
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 118. The hundred-seventeenth is the fact that the
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 130. The hundred-twenty-ninth is the fact that the
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 132. The hundred-thirty-first is the fact that the
 133. The hundred-thirty-second is the fact that the
 134. The hundred-thirty-third is the fact that the
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 136. The hundred-thirty-fifth is the fact that the
 137. The hundred-thirty-sixth is the fact that the
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 140. The hundred-thirty-ninth is the fact that the
 141. The hundred-fortieth is the fact that the
 142. The hundred-forty-first is the fact that the
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 144. The hundred-forty-third is the fact that the
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 148. The hundred-forty-seventh is the fact that the
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 151. The hundred-fiftieth is the fact that the
 152. The hundred-fifty-first is the fact that the
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 157. The hundred-fifty-sixth is the fact that the
 158. The hundred-fifty-seventh is the fact that the
 159. The hundred-fifty-eighth is the fact that the
 160. The hundred-fifty-ninth is the fact that the
 161. The hundred-sixtieth is the fact that the
 162. The hundred-sixty-first is the fact that the
 163. The hundred-sixty-second is the fact that the
 164. The hundred-sixty-third is the fact that the
 165. The hundred-sixty-fourth is the fact that the
 166. The hundred-sixty-fifth is the fact that the
 167. The hundred-sixty-sixth is the fact that the
 168. The hundred-sixty-seventh is the fact that the
 169. The hundred-sixty-eighth is the fact that the
 170. The hundred-sixty-ninth is the fact that the
 171. The hundred-seventieth is the fact that the
 172. The hundred-seventy-first is the fact that the
 173. The hundred-seventy-second is the fact that the
 174. The hundred-seventy-third is the fact that the
 175. The hundred-seventy-fourth is the fact that the
 176. The hundred-seventy-fifth is the fact that the
 177. The hundred-seventy-sixth is the fact that the
 178. The hundred-seventy-seventh is the fact that the
 179. The hundred-seventy-eighth is the fact that the
 180. The hundred-seventy-ninth is the fact that the
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 189. The hundred-eighty-eighth is the fact that the
 190. The hundred-eighty-ninth is the fact that the
 191. The hundred-ninetieth is the fact that the
 192. The hundred-ninety-first is the fact that the
 193. The hundred-ninety-second is the fact that the
 194. The hundred-ninety-third is the fact that the
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 197. The hundred-ninety-sixth is the fact that the
 198. The hundred-ninety-seventh is the fact that the
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 201. The two hundredth is the fact that the
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 2

It is the the cause of the
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large numbers of the
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It is the the cause of the
the same kind and the
the same kind and the
the same kind and the
the same kind and the

Dear Do you find the first
ever place.

Let the way to me as soon as you.

The first I want in this trip to be
in by means of the highway, and
as the path of the river is the same
principles.

182. I am not in doubt of all
things that are, and I believe
that the in the town of it
is a town by means of the
the way, and of the town. He
the 2d. I want in the town
the way, and the way, and
the way, and the way, and the way.

Concerning Nitrogen Gas, note

Amos, Isaac & Benjamin

...Kilogram gas?

10. The second has no upper part
the purpose of bounding the
superior.

1. The first of these is the fact that the
the first of these is the fact that the

18. The following is a list of the
 names of the persons who have
 been admitted to the Society since
 the last meeting. The names are
 given in alphabetical order. The
 names of the persons who have
 been admitted to the Society since
 the last meeting are given in
 alphabetical order.

Geological Observations

The observations made since we have known that the central part of the island is a part of the Tertiary formation, the same is true. we may therefore consider the existence in the nucleus of the island, no further distance it is that we believe of posterior formation.

Concerning Metallic Substances

Concerning Arsenic

Which is sold in commerce is a Metallic ore of a yellowish whiteness - The fumes of Arsenic and the white fumes are indications of the presence of Arsenic in any substance.

Mr. Kirck prepares a direct cyanide poison from poisoned by arsenic.

He prescribes one Dram Kepar Sakhur in a pint of Water to be taken three times a day at intervals of 12 hours.

is a more acute, so the arsenic &
lectics in constitutions.

One or two lines have been recommended
by the writer.

Chapter II

Concerning Cobalt

Is combined in the Borwells of the "Cobalt"
with Sulphur Arsenic and other metallic
substances.

Nickel

Bismuth

The property of amalgamating com-
pletely with Mercury may cause it
to be applied with advantage
the covering of gold, silver, copper, iron,
tin, bismuth, and Mercury.

Concerning Antimony
It is found in the bowels of the earth, in
various different states.

1. In the Metallic form
2. Combined with Arsenic
3. Mineralized with Sulphur.
1. In the state of Oxide.

The Oxide of Antimony contains a part of the
elementary Matter of Arsenic and one of Antimony
distributed together.

Oxide of tartar forms a very well known salt
with Antimony - which is called
tartar, stercorated Tartar. In
the New Nomenclature - it is dis-
tinguished by the name of Antimoniated
tartar or Pot ash.

Thermal Mineral

It is given in petulant cases and in Obstruction
of the Liver. - In a considerable dose it is
purgative and in a large portion emetic -
it is employed in the dose of ʒij. grain to ʒij -

Concerning Zinc -

Zinc digested with sulphuric acid in the cold produces
Hydrogen Gas. A salt may be
obtained by evaporation known by the name
of Vitriol of Zinc, White Vitriol, Sulphate
of Zinc

Manganese

A Mineral of a grey or blackish colour

Lead

The Muriatic Acid with Lead forms the
yellow pigment known in commerce by
the name of Patent Yellow. -

Concerning Iron.

Concerning Mercury -

Native Mercury has been found in digging the
foundations of some houses at Alhambra.
it likewise has been found in a Well at
Vienne in Dauphiny -

Mercury is usually mineralized by Sulphur
and the product is Cinnabar.

Mercury is sometimes naturally amalgamated

with other Metals, such as gold &c. &c. &c. &c.
See V. 6.

In order to make a fine red precipitate the
mercurial solution must be put in a Retort
and distilled until no Vapours come over —
An additional Quan. of Nitric Acid must
then be poured on the Remains and likewise
distilled off after 3 or 4 repeated distillations
a very ~~superb~~ beautiful precipitate is ob-
tained in small crystals of a very superb
red colour.

~~When the acid~~ The Muriatic Acid completely
dissolves the Mercurial oxides. When the acid
is saturated with Oxygen the oxygenated
Mineral of Mercury is formed —

La Gas of Corrosive sublimate in powder
mixed into a pint of lime Water forms
a yellow precipitate known by the Name
of Hyalogenic Water.

4 Ounces of Mercury triturated with 12 Ounces of
Sublimed Sulphur in a glass Mortar. The Result
is a powder called Ethiops Mineral.

The resin in the Colophony are to be first fused
after which the turpentine is to be added
and lastly the Colouring Matter.

Concerning Balsams

The principal Kinds - viz Benzoin: Tolu, and
Storac calamita.

1 Benzoin - 2 kinds Benzoe amigdaloides
and common Benzoin - It comes to us
from the Kingdom of Siam and the island of
Sumatra but we do not know the tree it
comes from -

Benzoin laid on hot coals fuses, hounded
and boiled in Water affords an acid salt which
sublimed forms the substance called flower
of Benzoin -

Aqua fatida is met with in tears of a
yellow white colour the plant which
affords it is called Lemula Aqua fatida -

Aloes

Succotrine, hepatic, and Coballine; it is made
by incisions in the leaves at ~~the~~ of the aloes vulgaris
Gum Arumoniae is very much used in Medicine

Elastic Gum is afforded by a tree called Seringa
the Indians of Para. it burns as a
burns & is used for illuminations instead of Wax.

Ether is formed by causing the oxygenated Muriatic Acid to pass through Very pure Alcohol the oxygenated Acid assumes its character of ordinary Muriatic Acid.

Citric Acid or Lemon Juice —

Mr Haenrichs succeeded in converting the Acids of Lemons, Citrons, Grapes, &c into the oxalic, tartareous, and Acetous Acids — from these experiments it appears that the oxygen, combined with a principle of Alcohol forms the oxalic acid; and that a more accelerated saturation of this principle to oxygen forms the tartareous & Acetous Acids.

Mr Lavoisier has proved that the known Vegetable Acids do not differ from each other but in the proportion of hydrogen and Carbon and in their degree of oxygenation.

Pyroligneous Acid - is obtained by distillation
from Wood -

Malic Acid—

Manna is extracted from the pine, fir, Maple, Oak, Juniper, fig, & others, Olive, Ash, Lamb & Thyme. It affords by distillation the Acid, Oil, & Anemoniac, and its Coal affords Alkali. This substance forms the basis of most purgative Medicines.

~~Spencer~~
~~England~~

The poppy is cultivated in Persia.
Near Derbent on the Caspian Sea there are
the springs of Naptha or a species of
petroleum, according to Kempfer. There
is a place known by the name of the serpent king.
The Indians do not attribute the origin of the
inextinguishable fire to Naptha; but the
Mahomedans that God has confined the Devil
in this place to deliver Man from him. They go
continually to the place and make their prayers to God that he will not
suffer this entrance of Mankind to escape.

Amber paper is of coarser matter than any
other Bitumen.

The combustion of those enormous Masses of Bitumen
which are deposited in the Bowels of the Earth
produces Volcanos.

~~The Heat~~ The hot Springs owe their
Heat entirely to the decomposition of Spirits.

The whole Art of Distillation is reduced
to the two following Principles

1. The Vapours ought to be ~~raised~~
~~and~~ ~~condensed~~ and raised and
in the most economical Manner.

2. And their Condensation ought
to be as speedy as possible.

Other Virtues formed by Alcohol and
Sulphuric Acid.

2 Ounces of Spirit of Wine. 2 Ounces of Ether
and 12 drops of Ethereal Oil form the
Anodyne Liqueur of Hoffman.

The distillation of Brandy by a moderate heat forms Alcohol or Brandy -

Tartar is deposited on the sides of Casks during fermentation this is called crude Tartar

The following is the process of obtaining the Acidulous Tartar of P. Art. - ~~or~~ or Cream Tartar - The Tartar is dissolved in Water, and suffered to crystallize by cooling the crystals are then boiled in another Cask with the addition of five or six hundred lb of the white Argillaceous Earth of Muscovy to each quintal of the Salt. After this boiling with the earth a very white Salt is obtained by ~~distillation~~ evaporation - which is called C. Tart. &c. -

Acid fermentation

The Mucilaginous principle is more especially the substance on which acid fermentation depends -

Putrid fermentation

Concerning Digestion

The Linguis called gastric juice, is obtained
by glands placed between the Membranes
which line the Stomach - Gallanzani
obtained this from ounces, ~~out~~ of the
Stomachs of two sheep - it caused ~~them~~
Crows to swallow eight at a time,
~~some~~ thin tubes of Metal at a time
pierced with ~~small~~ holes into it he
had put sponges very clean & dry -

It appears from the observations of the
Gallanzani and Goye, that the Nature
of the gastric juice varies according
to that of the Aliment - When the
Diet is vegetable the juice is Acid -

M. Buynatelli found in the gastric juice of
Carnivorous ~~Animals~~ Birds an Acid, Cream
& an Animal Substance united with
a small Quantity of common Salt.
In our time the phosphoric Salt have
been found in it -

Steph. Ginn, Toggia, and Carmonati, have made
the most successful Applications of the gastric
juice in the treatment of Wounds -

is a Mixture of oil, Lympha, & serum & chyle.

Concerning the Blood -

Human contains a dissolved alkali
Blood contains much Iron.

Concerning Urine.

Spermaceti

~~Defect~~ - Mr. Boyle obtained an Acid
from fat by Distillation -

Concerning the Bile -

by distillation in a Retort it affords
an empyreumatic oil, concrete
laxative and inflammable. It contains
Lympha, carbonate of Soda, & phosphate etc
etc - All the Acids decompose bile -
Salic Acid decomposes bile by double
decomposition and produces Metallic Soaps -
Nitric Acid decomposes bile into Water, or
white earthy principles of bile etc, Water, or
the color, a lymphatic substance, a resinous
Soda.

The Bile is an excellent Vulnerary internally
applied internally it is a good Stomachic and
the best decoction is the best of Medicine
- Bile of a saponaceous quality -

Urine -

is moved to contain an excess of acid. in its natural
it may be considered a Water holding in solution
thous or millions of Salts. These Salts, have Lime,
or Soda for their Basis -

Concerning Digestion

The Lungs called Gastric Juice, is
by glands placed between the Membranes
which line the Stomach — Challa.
obtained thirty from source, ~~part of~~
Stomachs of two sheep — it caused
Crows to swallow eight ~~at a time~~
~~round~~ thin tubes of Metal and
pierced with ~~small~~ holes into it
and put sponges very clean & dry.

It appears from the observations of
Hallan and Gole, that the Mass
of the Gastric Juice varies according
to that of the Aliment — When
Diet is vegetable the Juice is Acid —
M. Bagnatelle found in the gastric juice
of Carnivorous Animals Birds an Acid
& an Animal Substance united
a small Quantity of common Salt.
In our time the phosphoric Salt
was found in it —

Dr. Linn, Coggia, and Carmonati, have
the most successful Applications of
Juice in the Treatment of Wounds —

It is a Mixture of Oil, Lymph, Serum & Gall.

Concerning the Blood -
It contains a dissolved alkali
Blood contains much Iron.

Concerning Urine.

Stomach

~~Distill~~ - It can be obtained as an acid
from gal by Distillation -

Concerning the Bile -

By distillation in a Retort it affords
1 - an empyreumatic oil, concrete
2 - an inflammable air - It contains
Carbonate of Soda, & Phosphate of
Lime - It is the Acid decomposition bile
which is obtained decomposed bile by double
decomposition and produces Metallic Soaps -
The principal principles of bile are, Water, an
acidulent principle, a lymphatic substance, a viscid
matter, & Soda.

The Bile is an excellent Vulnerary internally
applied internally it is a good Stomachic and
one of the best deobstruents the Art of Medicine
has a Pile of a saponaceous quality -

Urine -

It is supposed to contain an excess of acid. in its natural
state it may be considered a Water holding in solution
Sulphuric or Muriatic Salt. These salts, have Lime,
or Soda for their Basis -

Concerning Digestion

Langius called gastric juice, is
by glands placed between the ~~stomach~~
which line the Stomach — Shalla
obtained this from ounces, ~~out~~ of
Stomachs of two sheep — it caused
Crows to swallow eight ~~of~~
~~which~~ thin tubes of Metal & it
pierced with ~~small~~ holes into it
and put sponges very clean & of

It appears from the observations of
Hallanzani and Gole, that the nature
of the gastric juice varies accord-
to that of the Aliment — When
Diet is vegetable the juice is acid —

M. Brugnatelli found in the gastric ju-
ice of carnivorous ~~Animals~~ Birds an ac-
id and animal substance united &
a small quantity of common salt.
In our time the phosphoric salt
was found in it —

Wine, Teggia, and Carbonate, has
the most successful applications of
juice in the treatment of Wounds —

which is a Mixture of oil, Lymph, serum & Salt.

Concerning the Blood -
Serum contains a dissolved Alkali
Blood contains much Iron.

Concerning Urine.

Theriacal

~~Theriacal~~ - Mr. Boer obtained an Acid
from fat by Distillation -

Concerning the Bile -

By distillation in a Retort it affords
Ammoniac an empyreumatic Oil, concrete
Lysac and inflammable Air - It contains
Iron, carbonate of Soda, & phosphate of
lime - All the Acids decompose bile.
Kalic solution decomposed bile by double
affinity and produces Metallic vapors -
The constituents principles of bile are, Water, an
acrid matter, a lymphatic substance, a resinous
oil & Soda.

The Bile is an excellent Vulnerary externally
applied internally it is a good Stomachic and
one of the best decoctions in the Art of Medicine
for the - Bile of a saponaceous quality -

Urine -

is proved to contain an excess of acid. in its natural
state it may be considered a Water holding in solution
the phosphoric or muriatic Salts these Salts, have Lime,
Magnesia or Soda for their Basis -

Antimoniate.

Antimoniate of Potash or Tartar of Antimony
Antimoniate of Potash or the Acidulous Tartar
of Potash & tartar of Antimony, or tartar of Antimony
acid in Water &c.

Antimoniate of Potash or tartar of Antimony
Mineral formed by ~~the decomposition of~~
~~Antimony~~ Antimony dissolved in ~~acid~~
of Antimony — it is used

Oxide of Zinc or Lapis Calaminaris
White Vitriol — Sulphate of Zinc
Made by dissolving Zinc in sulphuric acid
which when evaporated produces the
mentioned —

Sublimed Oxide of Zinc or Flowers of Zinc
is given as an Antispasmodic by the German
Physicians it may be given in the dose
of 1 grain in pills at a time.

Patent yellow or Minium of Lead

White Lead or acetate of Lead
White Lead formed by the acetic acid on lead
it corrodes it.

of Tin

in L. S. S. S.

in L. S. S. S.
in L. S. S. S.
in L. S. S. S.
in L. S. S. S.

* Baron Kienmayer describes
the following Amalgam
composed of 2 parts of Mercury
one of Zinc and one of Tin.

The Zinc and Tin are to
be fused & mixed with

Mercury & the Mixture agi-
tated in a wooden box inter-

nally rubbed with Chalk.

The mass is then to be reduced

to a fine powder and

placed in that state

mixed with grease.

The effect of this Amalgam

is surprising; for by this

is the power of elec-

trical Machines is increas-

ed by a hundred.

in Egypt and Arabia

Acidulous Lactile of P. Ash. or Crem. Tartar.

in the Composition

Carbon of Iron.

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

Carbon -

continued man.
Emetic water
improved in
J. (C. 1791) &
acid in Water

Home's Mineral
~~Water~~ (the
of testimony

Acid of Zinc
White Vitru
Made by def.
which when
mentioned -

Sublimed Ex.
is given as an
Physicians
of 1 grain

Patent yelle

White Lead ^{for a} formed by the acetic acid
is corroded

The amalgam of tin is used
to Silver looking Glass -
for this purpose, a leaf of
tin is spread out upon
a table of the size of the
Glass, Mercury is poured
upon it and spread
with a brush. This being
done a larger quantity
of Mercury is poured
the tin so as to form a
covering of more than one
line in thickness. The
Glass is placed upon this
covering, by presenting one
of its edges, taking care
at the same time that
the surface shall be free

the level of the Mercury, in order that the impenetrability which might hinder a perfect contact might be driven before.

The Plate of Glass is then loaded with weights in the Composition

unequally distributed over its whole surface, by Carbone of Iron.

which means all the excess pencils.

Mercury is pressed out flows away thro' Channels

in the edges of the Table. is common Water.

The Air being driven out is forms, is common

between the amalgam and the Glass in this is Detritus.

long compression serves to purify.

to render the Amalgam film Mineral

inert. - Several days Precipitate.

Corrosive Sublimation

or Lapis Infernalis

Quercus

from Arabia flows naturally from Acacia

in Egypt and Arabia

Acidulous tartar of P. Ash. or Crem. Tartar.

continued more
distinct in air
improved by heat
of (C. 120°) &
acid in water

Heimer Mineral
~~Distilled~~ in
of estimation

oxide of zinc
White Vitru
Made by dist.
which when
mentioned -

Sublimed Ex.
is given as an
Physicians
of 1 grain

Patent yellow

White Lead forms by the acetic acid in air
is corroded

are required to escape
before it be put in
air to admit of removing
the fumes. — Tin alloy
with Copper forms bronze
or bell Metal.

Copper

Copperas made by fermenting
on Copper

Moylewood

...sides of lead are soluble in vinegar
...olution of the nitrate of lead in vinegar
...crystallizes in efflorescent tetrahedral prisms
...forms the salt of Saturn: or Sugar of Lead.

Concerning Tin *

It is dissolved in aqua fortis form, the Composition
...dying scarlet.

Stannago, or the Carbure of Iron.

is used to make black lead pencils.

To make good Ink - 1 lb. of Galis. 6 oz of 4. Arabian
6 ounces of green copperas - 4 lb common Water
sugar is sometimes added
...iron dissolved by the sulphuric acid forms, is used in
India.

Sulphate of Copper - or Blue Vitriol -

...acid & Copper - forms Verdigris -

...ate of Mercury - or Turbith Mineral

Nitrate of Mercury - or Red Precipitate.

...ate of Mercury or Corrosive sublimate

Nitrate of Silver or Lunar Caustic -

...Arabia - flows naturally from the
...Egypt and Arabia -

Acidulous tartar of P. Ash. or Crem. tartar.

comb. et distinctio bene. Spec. generat. et
var. in part. China —

It is with the bee bread a leaf in mine

the little pure heart the is was

Left the station at 10:45

~~Let your letter be the~~

runa phluir the bloody security.

Δ. η.

John Foght and Co., for hardware &c.

Have the friends of heavenly Love

Place near Walnut House of an

Best my friend from Mary

Writing with that pen

we both have / from both the city & back.

There are three reviews of the book

Have dear friend's favour of line

Structure of Vegetables—

Bark compos^d 3 Tunics - 1. Epidermis, cellular tissue,
and cortical coatings - The Bark is the most
essential part of Vegetables, by means of which the
principal functions of life, namely Nutrition,
Digestion, &c. are performed.

Water is the most essential Natureive
Principle of Plants. —

Van Houten planted a Willow weighing
15 pounds in a certain quantity of earth co-
vered with flat lead; he watered it for
five years in Gessell's Water; and at the
end of that time the tree weighed 169 lb
and the soil in which it vegetated
was found to have produced a Lot of no
more than 8 pounds.

The Cord is the plant or the placenta to the
child & it carries & disposes the blood of the
mother to become a new life.

Carbonic gas serves them more particularly
for aliment — Carbonic acid also

Vegetation may be successfully employed to correct air too highly charged with Carbonic acid or in which the Nitrogenous gas exists in too great a proportion. —

Article V

Light is absolutely necessary to plants. The property which plants possess of converting Nitrogenous gas and carbonic acid into Nourishment establishes an astonishing degree of Analogy between them & certain Trees.

It appears from the observation of Deane German that the air may become so foul for the (Lass of Sweden

Engelmann is of opinion that the green matter which is formed in plants and transpires oxygenous air by heat

of the Sun is a cluster of emanations has added to these phenomena I have

have moreover the organ of Respiration distributed over the whole surface of the body

Gum Arabic flows from the acacia in
Egypt Arabia -

Olives are ground & expressed: the first
oil which comes out is called Virgin oil -
Oil easily combines with oxygen. This com-
bination is either slow or rapid. In
the first case Lancidity is the consequence
in the second inflammation - It is
to be treated with boiling Water, to attract
the Menstruum, before they are submitted
to the press a fine oil will be obtained
without danger of Lancidity -

The Lamps of Primer are likewise en-
titled to our particular attention. By
crossing the Rays to pass thro' a Lignior
lens. Blue; he perfectly imitates the
color of the dawn which proves that the
artificial Rays require to be mixed
with the blue, to imitate the Nature
and the Solar Rays which pass thro'
the atmosphere, may give their Colour to
the combination with the blue colour

which appears to predominate in the
Air — The Mercurial Cup is made
with stannum & 1/2 its weight of oil,
and the mixture concentrated by fire.
To make the soap of Commerce one
part of good Soda of Ancient must
be rolled with two of Linné lime in
a sufficient quantity of Water. The
Liquor is then to be strained thro' a
Cloth, and exhausted to that degree
that a third which contains eight
of pure parts, may hold eleven of the
saline solution, which is usually
called salt water Lees. One part
of this mixture in 4 of oil, being
boiled, till when mixed with water
it separates in its particles, and
soon coagulates, form soap.

I obtained from a species of Linné
which grows in China and Japan
the salts are called Liné
produced by the action of water

roots of the same — cap. — Peppermint also
and ferns.

Concerning unish

It is obtained by a tree in China —

The Chinese use the oil of tea, which they
render fragrant by boiling it with spiritus
of Sassafras.

Decoction of Vegetables
The oil of Palm is mixed with water
for diet. ~~It is used to make~~
small grains. The peculiar
oil forms a very nourishing Jelly.

Concerning the Calculus of the bladder

I consider it a substance intermediate between
the stone and the sand. —
It is deposited. I have seen
a calculus with a layer of sand on the
outside —

Phosphorus

Winkel discovered it in urine —

Concerning the Products afforded by
Quadrupeds - Castoreum

It is an unctuous fluid contained in two
pouches situated in the inguinal region of
the male or female Castor -

Musk

It was obtained from an animal called the
Musk Animal from China & Tibet. It is
the organ which contains the Musk
situated near the genital parts - it is
served by two glands - The other animal
which affords Musk in the East, is of the
Class of Squirrels it is very common in
China. It carries the Musk
in a bag beneath the Navel. -

Prunella of India.

Cochineal is an animal collected upon plants
to which it is in India called *Indigofera*
the *Acacia* of India of a purple color.

Acids extracted from the bodies of
Kingdom - acid of Hillebrand, of Ant,
and worms.

Concerning the formation

Examination of Mineral Waters. —

Acids are found in the bodies of Ants
and worms. The acid of Hillebrand, and the
acid of Ants.

a bay benca on
Pro...

Cochennele is an animal
~~to which~~ in Meier cat
his Accupene

Part the 4th

Concerning Vegetable Substances.

Concerning the Structure
of
Vegetables.

Article I

Concerning the Bark.

Exordium -

Part II

Concerning the Lignous Structure.

Three kinds of vessels may be distinguished
in Vegetables: 1st Common or Sap Vessels;
2^d proper Vessels; and the 3^d is called a
Trachea -

The Trachea is a sort of Vessels or Repo-
sitory which contain the 2^d and 3^d and serve
for retaining Water -

land, as a small protuberance, & is seen
upon various parts of the hills.

concerning the
Nutritive Principles of Plants

Concerning Water, as a Nutritive
Principle of Plants. —

Concerning Earth, and its
Influence in Vegetation. —

Vegetable almost entirely formed
of Carbon. —

107. III

Concerning Nitrogen gas, as a
Nutritive principle of plants. —

Dr. Liebig, Ingenhousz, and others
have proved that it is the
Nitrogen gas which more particularly forms
them an element. —

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109. IV

Concerning Carbonic Acid as a
Nutrient for Plants.

Concerning Light, and
its Influence on Vegetation.

Concerning the Property which Plants Possess
of Converting Nitrogenous Gas and
Carbonic Acid into Food, and
establishing an analogy in degree of
Analogy between them and
Carbonic Acid.

Concerning the Results of Vegetation,
or the Vegetation Principles.

Concerning the Principles
of the Basis of the higher plants
in the Soil of Plants.

2. How many gums are there?

A. Three, 1 Gums of the country

2nd Gum Arabic — it flows naturally from the acacia in Egypt & Arabia

3. Gum Adragant — it flows

from the Adragant of Creta a

small shrub not exceeding three

feet in height —

Concerning Oils

Concerning fixed oils

olive oil is obtained by expressing
from the fruit of the Olive Tree —

oil easily combines with water

Mucilage may be considered the Seed
of hemlock

1 lb. of the seed 1 lb. of oil

2 of Duckhorne boiled in water

1 Lignum to be strained & is evaporated

to that degree, that ^{it} ^{is} ^{the} ^{only} ^{one} ^{which}
contains eight ^{of} ^{the} ^{same} ^{water}
more ^{solid} ^{than} ^{any} ^{of} ^{the} ^{others}
mentioned ⁱⁿ ^{part} ^{of} ^{this} ^{Section}
and ^{if} ^{you} ^{will} ^{get} ^a ^{little}
upon ^{trial} ^{with} ^a ^{glass} ^{of} ^{water} ^{it}
easily separates, and ^{from} ^{Caagu}
ate ^{from} ^{Soap} —

Concerning ^{the} ^{Notes} ^{of} ^{the} ^{Chin} —
as I ^{under} ^{stand} ^{them} —

Amphora

2. How and where it is obtained
It is from a species of ^{Amphora} which
grows in China and Japan.
By ^{distillation} — The Roots are
generally ^{broken} ^{and} ^{water}
added they are put into an ^{Amphora}
and ^{distilled} ^{off} —

It is also obtained from Lycopodium
Seymourii &c — page 80. — Pteris-
Mun?

The Holcandou nearly resembles
Lycopodium in America & Lycopodium
is more common in the south of the
Atlantic, and Lycopodium it
in large quantities in the south.

Campbell is no doubt one
of the constituent principles
of some of the most important
in the human body, and
does not become so much
as the "containing" with
certain.

Campbell is also found in
Coffin, Iron, Bismuth, &c.

Common Resins.

The Balm of Mecca flows from
a gum made in the way is
Aphobalum. Called sometimes
Balm of Gauda. It is a
Terreous Juice obtained from an
ever-green tree —

Balsam of Capivi flows from
a tree called Capivi in
South America Near Soler.

Asphaltum collected from the sea
and in the Mountains
of Judea. —

Camphire is obtained
from a tree named
Phicea —

Camphire is the seed of
a small tree —
Dragon Blood is obtained from

the Sunkhona in the Lapa.
colours — It is a common
substance —

Concerning Balsams

There are three kinds —

1st Benzoin, Balsam of Tolu
and Storax calamita —

1 Benzoin is a resin of a pleasant
fragrant smell — 2 Kind — Benzoe
amygdaloides, and the common
kind. It comes from the
singes of India, and the Island
of Sumatra; Sublimate it from
Singe of Benzoin — The resin
comes from a tree we are not ac-
quainted with —

The resin of Benzoin

It uses as an emulsion in medicine.

Storax Balsams of Peru & Tolu extracted
from a plant growing

Concerning Gum Copins 3^d

Resinum - it is used to disguise
the name it comes from the name of
the place in the East Indies - (*Juniperus Lycia*)
Scammony - from *Hept* and the
other from *scammon* is a useful
Purgative - *Convolvulus Scammonia* is extracted
from the roots of a large climbing tree growing
in Asia - *Hept* - *Substance*
obtained from a plant *Scammon*
Persea - *Scammon* growing in
Persia -

Aloe - *Alumina* - *Alumina* - *Alumina*
from *Toccolina* in the Indian Ocean
Resinatic - *Alumina* - *Alumina*
from certain plants of the same name

Gum Ammoniac - *Compositum*
the Deserts of *Arabia* - *Phytoria* - it
is extracted from the species of *Phytoria* plants
- *Scammon* - *Scammon* -

It is obtained from a tree called
Seringa by the Indians of *Para*.
it is used for illumination instead of
Candles.

Concerning Vermis -

Is obtained from a Tree in
the East India, by incisions
made in the Trunk of the Tree.

Concerning the Secula
Vegetables. -

Is obtained from the
Islands of Java, Borneo, &c.

Is obtained from the
Middle aged Palms.

Is obtained from the
Bulls of the
Lands of the
Islands of the
East India.

Concerning the Vegetables.

Is obtained from the
Islands of the
East India.

Concerning Sugar -

Is obtained from the
Wheat and Turkey Corn. From, Beet
Parsnips &c.

Is obtained from the
Islands of the
East India.

The Juice of the cane is boiled and
common in some several boilers
in the state it is a bloody sup-
and it is again boiled with
lime and alum till it is
sufficiently concentrated and
poured into a vessel called a
boiler - In this vessel it is
agitated with wooden stirrers, to
break the crust and forms in the
surface. It is afterwards poured
into tanks, to accelerate its cool-
ing, and when warm conveyed
into Barrels -

Acid of Sugar -

Concerning the Vegetable Acids.

Concerning Alkali

Common is found in plants -

Concerning the Colouring
Principles -

Concerning the Pollen,
or fecundating Powder of the
Stamina of Vegetables

Concerning Wax
It is merely the Pollen very little
altered —

Concerning Honey.
It is contained chiefly in
the Base of the Stamen

Concerning the Ligneous
Part of Vegetables. —

Concerning the fixed ^(a) Principles
of the Vegetable Kingdom.

2th

Of the Common Juices extracted by
Incision or Expression. —

Concerning the Juices
Extracted by Incision. —

Manna. — Extracted from the bark,
fir, maple, oak, Juniper, big
Willow, &c. — But the
Ash, Birch, &c. and it is very
Essential. — it grows in
Calabria, Sicily, &c. —

It is a. s. d. by distillation (water, acid,
oil, and ammoniac. and it
has several uses.

Opium. — afforded by the Poppy which
is cultivated in Persia, &c. &c. —

The aroma of Quinum or Quinine
 Principle is a Medicine for Quinine
 Value, because it does not produce
 that Drunkenness and other which
 are too commonly the effects of Quinine
 Quinum. 13 of Marc or Quinine affords one of
 ounce of Quinine 12 3 Quinine 13 of Marc - 3 3 gr
 concerning the Quinine

Extracted by Pressure.

Concerning such Principles as escape
 from Vegetables by transpiration.

VII. Air, Water & Quinine.

Concerning the Quinine Gas

is produced in the Quinine
 Dr Ingenhousz affirms that the Quinine
 emitting vital Air when acted upon
 by the direct Rays of the Sun. and

that emit a very metallic air in
the Shade, and during the Night
The Parenchyma of the Leaf appears to
be the part which emits the air.

Concerning the Heat afforded
By Vegetables. —

Concerning the Aroma
of
Spiral Plants. —

It is of the Nature of Heat.

Ingenious quote on Immense of the
Death of a young Woman occasioned
by the smell of Lilies. —

The Mammelle Tree of India
is poisonous.

Concerning the Attraction to which ve-
getables are subject when they are
detached or ripe. -

Concerning the Action of Heat
Upon Vegetable Substances.

Vegetation, when - Water, air,
light, heat and cold.

Cacao is a de-odorant
and it is the
the active part. -

Concerning the action of heat
upon Vegetables.

The effect of heat upon vegetables
in Spain is different
from that of the same in France.

9th.

Concerning Lit. local

The Petitioners disengaged from local
business for -
on a basis of the same
subject - there is a force in
the name of the people. The
The Indians do not attack
the right of the incipient
but to a subject - the
maintain that God has
the Devil is the
Man from him.

And he is going to
Baptist Church, on the
Prussia -

It is for the purpose of
of the church, and
with a great many

Experiments

Concerning Volcanos

Concerning the Decomposition of
Vegetables in the Boilers of the Sun

Concerning the Action of Air
and Heat upon Vegetables.

Concerning the Action of Air and
Water, which determines a Fer-
mentation of Fermentation that
separates the Soluble Juices
from the Lignous Part

Concerning the Action of Air, Heat
and Water upon Vegetables.

The conditions necessary for the
establishment of fermentation are

1. The amount of pure air
2. & a certain degree of heat
3. & a quantity of water, more
or less, in solution which produces
a difference in the effects.

The phenomena which essentially
accompany fermentation

- are - 1 The Production of Heat
- 2 The Absorption of Oxygenous
Gases.

Two kinds of leaven may be
distinguished -

1 Bodily, eminently putrescible
the addition of which to the
fermentation.

2 That is already a compound
as yeast.

Concerning the Spiritous Fermentation
and its Products. —

Pure Sugar mixed with ^{Water} ~~Saffron~~
or ~~Rum~~ ^{Saffron} forms ^{Rum} by fermentation

2. What is Required in the Development
of this Fermentation?

1. A degree of Air

2. A degree of heat between
10 & 15° of Fahrenheit

3. The Division and expression
of the Juice contained in the
fruits, or in the plant.

4. A Vase or Vessel in which
what is said is done.

6th
C^o

The Juice of Grapes, by confection forms
Wine or Wine, from Cyder.

From Wine a kind of Cyder called
Cider.

1. How is Wine usually decomposed?
ed. By Distillation

2. By what name is the first part
of this operation known?

ed. Brandy.

2. How is Spirit of Wine or Alcohol
formed?

ed. By the distillation of Brandy.

It seems to be formed by the intimate
Union of much Hydrogen and Carbon.

Spirit of Wine combined with oxygen
forms a Liquid nearly insoluble
in Water, which is called Ether.

2. Now is it made?

A. By putting Alcohol and an
equal weight of Concentrated
Sulphuric Acid into a Retort -

The Retort placed on a stand with
a Receiver is adapted and the
Mixture heated to Boiling -

Alcohol first passes over; soon
after which Streams of fluid appear
in the Neck of the Retort, and
within the Receiver is denoted the
Rising of the Spirit - If the Distillation
is continued a Ethereal oil is formed

Concerning Tartar.

It is deposited on the Sides of Casks during fermentation. —

2. How is the acidulous Tartrate of Pot-ash formed?

A. By boiling the Chrysolite or Tartar with white, argillaceous Earth and after this boiling a very white salt is obtained by Evaporation, known by the Name of Cream of Tartar or acidulous Tartrate of Pot-ash.

Concerning the Acid Fermentation.

3 Causes Necessary to produce Acid Fermentation — VV.

1. The Existence of Mucilage
2. A Degree of heat between 18 & 25 of Reaumur.
3. The presence of oxygenous Gas.

Distilled Vinegar

Acetate of Potash

The Acetic Acid is capable of combining with a stronger base of Pyrogene; and then forms Radical Vinegar or the Acetic Acid.

Concerning the theory of fermentation

Part 6th
Concerning Animal
Substances.

2. Has not the Chemical art marked
the limits between vegetative and
Animal substances?

A. Yes there has afforded ammonia by
putrefaction, while the fermentation
of the same develops sidant spirit.
The latter leaves a coal which burns
easily; while the former becomes
converted into a coal almost
incombustible - Animal Matter
contains much Nitrogen ~~is~~ may
be disengaged by means of Nitric Acid.

Concerning Digestion. —

That humor which is known by the
name of the Gastric Juice, is secreted
by Glands placed between the Membranes
line the Stomach.

2. According to the Observations of
Messrs Gallanzani and Jussu does
not the Nature of the gastric Juice
vary according to that of the Al-
=ments?

A. Yes; This Juice is constantly
acid when the Diet is vegetable.

Messrs Jussu, Loggic, and Rammati;
have made the most successful
Applications of the gastric Juice in
the Treatment of Ulcers.

In the gastric Juice of Carnivorous Birds
a disengaged Acid is Perceptible in a small distance

Concerning Lactic Acid.

Lactic acid—

Chap. III.

Concerning the Blood.

In the distillation of Blood. The first part
is Acid, Oil, Carbonate of Ammoniac

A Spongy Coal Remains in the Retort
a very difficult incineration, in which
are formed Sea Salt, Carbonates of
Soda, Iron and Phosphate of Lime.

Alcohol and the acids coagulate Blood.
Alkali renders it more fluid.

Form of yellowish green colour.
Coagulated by heat & acids &c.

The fibrous part it contains much
amorphous.

Blood contains much Iron and this
and the colour of the Blood appear
to be entirely formed of it - as
Oxygen alone is absorbed in Respiration
it appears that the colour is owing to
Iron calcined by the heat of the body and reduced to
oxide of Iron.

Concerning Fat
Siccac Acid.

Concerning Siccac

Siccac is a Soap resulting from
the combination of soda with
a matter of the Nature of Resins
and a Sympomatic substance
which renders it susceptible of
putrefaction and Coagulation.

The Acids & act on the Siccac in
the Stomach & decompose it
as in the Excrements of Infants.

Excellent
Internally used as an Laxative
Externally - a good Stomachic
and one of the best deobstruents
the Art of Medicine possesses.

And this is a proper occasion^{2nd}
when the Digestion Pancreas, or
the Viscera of the Lower Belly are
affected.

Concerning the Soft and white
Parts of the Simula.

Isinglass made of the Mucilaginous
parts of a large fish commonly
found in the European Seas.

Concerning the Musculen
Part.

Concerning Urine.

In a Natural state, is transparent
of a light yellow, &c. a Sal
tate &c.

Urine in its natural State is
a Water holding in solution
matter purely extractive as
Phosphoric or Muratic Salts.
These Phosphoric Salt have
Lime, Ammoniac, or Soda,
for their Basis; and will take
a slight tincture of each in par-
-ticular.

Concerning the Calculus
of the Bladder

Paracelsus thinks it absolutely
similar to the matter of the
Gout.

It contains Ammoniac

It contains an Acid called
Arturic Acid.

Concerning Phosphorus.

To make Phosporus -

Take - Muriat of Lead
10 lbs. & the Extract of Urine
of the Consistence of Honey.

$\frac{1}{2}$ lb. of Charcoal is added.

The Mixture is dried in an oven
first until it is reduced to a
black Powder. This Powder is
to be put into a Retort: and
the Retort is to be heated with
oil and the Sal. Armon. distilled
etc. - The Residue contains
the Phosphorus.

It is of a flesh Colour, and evidently
homogeneous. It has the Consistence
of Wax and may be cut in pieces
with a Knife. It is luminous
in the dark.

Phosphoric Acid formed by the
Combination of Phosphorus with
Oxygen.

Concerning the Product
acted by Quadrupeds.

Caster, ... and ...

is an unctuous fluid

Caster found in a grain of ...
female - it is a resin joined
to a Mucilage, and a salt which
facilitates the Union of its Principles.

Musk The Animal ...
Civet - found alone ...

Castoreum from ... by Distillation

Concerning Certain Products
afforded by Fishes.

Spermaceti

Concerning Certain Products
afforded by Insects.

1 *Cantharides* - found on the
leaves of the Ash, Rose Tree,

Cochineal - is collected in Mexico
upon *Opuntia*, which bears fruit
resembling figs - The Indians
found as it were on its leaves,
the little insect, called *Cochineal*

Acid of uric
Acid of S & H Urine

Concerning Stricture.

Concerning Mineral Waters

Sulphureous Water ...
the ... of ... which
they ...

1. Natural ~~Mineral~~ Waters.

These have the property of ex-
hibiting a ... colour by
the solution of Prussiate of
Lime: they have been a
new ... at Astringent ...

There are two things to be considered
in the Analysis of Vegetables.

1. The Volatile principles.
2. The Fixed principles

The Vol. Principles are Carbonic
acid Gas and Repetitive Gas.

Repetitive Gas may be precipitated
in the very concentrated Nitric
acid —

Carbonic Acid Gas precipitated
by Lime Water

The Fixed principles are obtained
by Evaporation. —

Analysis of Solids

Q. What in fact is a Mineral
Water?

A. It is Rain Water, which, falling
thru the Mountains, becomes im-
pregnated with the various
Soluble Principles it meets
with.

(1)

Racina vera / Mimosa nitida
" is brought to us from the ~~Indies~~
Egypt. it is the inspissated Juice
of the unripe fruit of a large tree
the same is produce the Gum Arabic.
It is a mild astringent Medicine.

Aconium napellus Lin / Aconitum.
from a poisonous plant growing
in Mountainous parts of Europe
It is one of the most active vegeta-
poisons - Dr. Smeath recommends
it in a cancerous swelling. &c

Agaric Trichewood or Spurr K.
(the fungus of the Oak.)

Agrimony - Agrimonia eupatoria
A common plant in hedges and the
Woods &c &c.

Angelica - is a large umbelliferous
plant, it is an elegant
Aromatic -

Histolochia - Aromatic

Arnica - German Leopard
Bane - This plant grows in
Germany - ~~Aromatic~~ - it is
recommended in Paralytic
affections - it is very powerful
Dr. Boerhaave of Vienna wrote on
it - it has an acrid bitter
taste and exerts a strong

Araucum -

Belladonna - Nightshade -

Benzoe - from a tree in the Island
of Sumatra -

is a low plant
Petony - growing in Woods and shady
places in England. -

Borax Stone -

Bryony Root - of a rough plant -
It is a drastic purgative.

Biglof.

Cajobut - from the fruit of the
Stalecula leucadendron -

Caryophyllata - Avers the Root -
It has a warm, bitter, astringent
taste - is said to cure Intermission.

Cassia - is a Bark employed
in Cure of Intermissions - Aromatic
& fragrant. -

Cassia Fistularia — $\frac{1}{2}$ it is
the fruit of an *Acacia* tree —
is gently laxative

Cassia lignea — from *P. Indica* —
resembles *Purshiana* is obtained
from a species of the same tree.

Cassia —

Catechu or *Lacca Japonica* is
the product of a plant growing in
the E. Indies. — is a powerful
stringent. —

Cichorium or *Succory* — is
used in Catarrhs. Affects
the Root and Liver.

Cicuta or *Henbane*
— a large umbelliferous
plant —

(2)

Cinnabaris native

Crocotidis - is ^{the} produce of
a plant of the Gourd Kind.
~~growing in the East~~ growing in ~~the East~~ ^{India}. The fruit is
about the size of an orange
its medullary part freed from
the Rind and Seed, is alone
made use of in Medicine. - it is
very bitter & nauseous - it is
powerfully Cathartic.

Colomba - Comes from Colombo in
Ceylon.

Conchagua is a Root of an
Aromatic plant is a good dia-
phoretic.

Cinnamon Aromatic -

The seed of the wild Paeonia,
is called Colchicum is powerfully
purgative. in doses of only 2 or 3
grains. used very much in the
treatment of Dropsy.

The fruit of the wild Paeonia
is not bigger than a Spanish
olive — wild Paeonia is found
wild in some countries.

Summery — comes from S. India,
but the bark is obtained from
and Eumonyque.

Wistaria. Fox glove — L.
It grows wild in woods
and is cultivated for
it bears an elegant simple flower.

Galbanum — is the Concrete juice
of an African plant is a green
viscid with Gum Eumonyque.

Pamboule a solid narcotic
brought from the E. Indies

Gooffica inermis - Rabbage Tree
grows in W. Indies - is used
in the expulsion of the Pimberis.

Quacum - from a Tree growing
in the W. Indies -

Quercus nigra - from a Thorny
Bush growing in India

Lycium - This vegetable
grows common in Brazil
it belongs to the natural
order of the Solanaceae - Comprehending
the greater part of the Narcotic
vegetables - used in various
Cholera &c -

a Specie
Pyrotia Suetica - Is hot in
flavour for Indies & Kind.
Peruvian & Mexican
is a Root of the *Pyrotia*

Kino - a vegetable substance
Achen - *Linewort* - ^{Plant} this,
grows in a marsh - it is a
warm Diuretic. Been used
for the *Hydrophobic*.

^{this plant}
Lobelia - grows in moist place
in America. it is used by the
North American Indians in
the cure of the *Mercurial*.

gum Mastich - used in cold Coughs.
Mezerion - it is a native of Europe
has elegant white flowers.
G. Myrica - is brought from India.

Nux Vomica the produce of
 a Tree growing in the East
 India. is said to be a specific
 against the bite of a snake — it
 is bitter and deleterious — has
 been used in Intermittent &
 Dysentery.

R. thibetana

Peony this plant grows common

Palmæ it affords an oil

Parsia *hava* an American
 Plant. used in Pulverification of
 Wine —

Peruvian Bark — The Tree is
 about 15 feet high & 6 inches
 thick

Thalictarum - This plant
which is of the Dock kind grows
spontaneously in China -
2 Sorts - Turkey and Russia -

Ricinus Palma Christi -
The Seeds are next about the
size of small Beans. -

Sasaparilla - Concise Juice
brought from the Indies.

Sanguis Draconis - is a Gummi
Resinous substance got from
the Indies, it obtained from
several Vegetables.

Sassafras - The Oil is
got from the Tree -

Scammony a concrete Juice
of a large Climbing Plant
growing in the Asiatic Countries.
Powerful Purgative

Senna a Shrubby plant
Cultivated in Persia.

Spigelia - Marilandica
Indian Pink. —

Spongia Sponge

Stramonium Datura
Thorned Apple — is a Shrubby
plant considerably smaller
than the Lavender. It is usually
narcotic has been used in Asthma
Epilepsy &c.

Perca. an indigenous American
substance coming from a Tree
growing in warm places also

Amber. Ties out of the East
and floats on the sea shore

Uva Uvi Beans when they

Winter in Cortes - dangerous
in America but safe & is
good for many.

Part II

Mr. De Mours has substituted the pre-
-sident of the committee with the
-advantage of time to write a letter.

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1. Name of _____

[Faint handwritten notes, possibly "att."]

The first is the *Sciaenidae* family
which is found in the Atlantic
and the Gulf of Mexico
and the *Sciaenidae* family
with the *Sciaenidae* family
and the *Sciaenidae* family.

The second is the *Sciaenidae* family
which is found in the Atlantic
and the Gulf of Mexico
and the *Sciaenidae* family
with the *Sciaenidae* family
and the *Sciaenidae* family.
The third is the *Sciaenidae* family
which is found in the Atlantic
and the Gulf of Mexico
and the *Sciaenidae* family
with the *Sciaenidae* family
and the *Sciaenidae* family.
The fourth is the *Sciaenidae* family
which is found in the Atlantic
and the Gulf of Mexico
and the *Sciaenidae* family
with the *Sciaenidae* family
and the *Sciaenidae* family.
The fifth is the *Sciaenidae* family
which is found in the Atlantic
and the Gulf of Mexico
and the *Sciaenidae* family
with the *Sciaenidae* family
and the *Sciaenidae* family.

... ..

... ..

It appears by the
 in the dark, as

... ..

1841. I have a letter from
you dated 1st June, 1841, which
I have just received. The letter of the
1st June is also received.

For my own I have a letter of the 1st June
and the letter of the 1st June is also received.

Thank you for the letter of the 1st June
which I have just received.

I have a letter from you dated 1st June
of 1841.

I have a letter from you dated 1st June
of 1841. I have a letter from you dated 1st June
of 1841. I have a letter from you dated 1st June
of 1841.

1870

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Jan. 18

... ..

Jan. 1

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2.?

18.

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Abstract of 4 lines

Page 1

Copy with me to the

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1872
of the year 1872
the year 1872

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the year 1872

1. The first of the month

was a fine day

and the weather

was very pleasant

10. The 10th of the month

was a fine day

The 11th of the month

was a fine day

12. The 12th of the month

was a fine day

13. The 13th of the month

was a fine day

14. The 14th of the month

was a fine day

15. The 15th of the month

was a fine day

16. The 16th of the month

1. The first of the party
is a young man named
John Smith

2. The second is a woman
named Mary

3. The third is a young man
named John, in order that
the whole party should be
able to go with the party.

4. The fourth is a young man
named John

5. The fifth is a young man
named John

6. The sixth is a young man
named John

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Red Gem - form the precious stone, or
Gems.

Red Gem - Ruby, Garnet &c.

Ruby the most precious and hardest
of the precious stones - Formerly used
by Vital Airfures it - as also the
Borate of Soda -

Garnet of a Fine Red -

Division II

Yellow Gems or precious stones -
The Topaz, the Hyacinth &c -

The Topaz is of a Gold color -

Hyacinth of a Reddish Yellow color

Diviⁿ III

Green Gem - the Emerald, Chrysoite,
Beryl - some in America

Diviⁿ IV

Blue Gems Sapphirine
Sapphirine is Sky Blue -

Spec II

Silex, sometimes pure, but often mixed
with a very small quantity of
Alumina, Lime & Iron. -

Diviⁿ I

Rock Crystal

Facets 1

Red Crystal - False Ruby.
Yellow Crystal - Bohemian Topaz
Brown Crystal - Smoky Topaz
Green Crystal - False Emerald
Blue Crystal - Water Sapphirine -

Violet Crystal - The Amethyst.

Division II

Quartz -

Spec. III

Silex, Alumina Lime and
Iron intimately mixed -

Division I

Boars Flint -

Division II

The finer Flints -

1 Agate - Chal - Cornal come
from Egypt
Calcedony - Carnelian -

Carnelian, Sardonyx.

Spec. IV

Silex, Alumine, & Iron -

Jasper -

7

Spec' IV

Spec. Siliceous, Humine and Iron.
Paper which ^{forms} is one of the hardest
Stone we are acquainted with.

~~Spec. Siliceous, Humine and Iron.~~

Spec' V

Spec. Siliceous, Humine, Lime with a
small portion of Magnesia and
Iron. —

I. Siliceous Humine —

II. Schorl

1 Black Schorl
2 Green
3 Violet
4 White all these found
in Mountains of Pyrenees —

III. Volcanic Products are Basal.
Lava & Terra Pozzolana. —

The Hardest (Bara) & hard the
Most beautiful Clays

Spec. vi
Silica, Lime, Magnesia, Iron, Cobalt
and the Fluoric Acid. —

This Combination forms the
Chrysochase. —

Spec. vii
Silica, The blue fluato of Lime,
with the Sulphate of Lime and
Iron. — forms Lapis Lazuli
or Azur Stone —

Sp. viii
Silica, Alumina, (Barytes and
Magnesia. — Called Feld Spar —

Cap. III
Concerning the Mixture of Stone
among each other. — Rock &c

Gen I
Rocks formed by the mixture of
Calcareous Stones & Murch Spec?

Spec I
Carbonate of Lime, and sulphate
of Barytes —

Spec II
Carbonat. of Lime and Mica

Spec III
Mixture of Calcareous & Magnesian
Stones —

Calcareous Stones and
Fragments of Quartz. —

Jasper & Feldspar.
Commonly Called Porphyry.

Jasper & Garnet.

Jasper & Calc. m.

Jasper & Quartz
 Jasper Quartz, and
 Feld Spar. —

Stone, Garnet, and
 Tourmaline —

Concerning the Diamond

I found on the Coast of Hormondal
 in the Kingdoms of Golconda and
 Visapour —

Diamond. Divid^d into 2 Kinds

- 1 The Oriental Diamond
- 2 The Brazilian —

The Emper^r of Russia gave 120,000
 of Gold for a Diamond or 100,000
 Florins —

The Diamond is Comestible

General Views

Respecting
the Decomposition and Changes to
which the Stony part of our Globe
has been subjected—

We shall first examine the primitive
Rock which forms the Nodule or Cen-
tral part of our Globe—

Q. What does the Central part of
the Globe consist of?

A. Granite— This Substance is
considered as the Nucleus of the
Globe— and upon this Substance all
Matters of posterior Formation rest.

Concunony Antimony

When mineralized by Sulphur
it exhibits 3 or 4 Varieties
it is sometimes Crystallized
of a grey Color inclining to
Blue

Plumose Antimony is usually of
a blackish Grey. This Variety
has been arranged among the
Ores of Silver. Because it for the
most part contains that Metal.

Ores of Antimony have been found
in several parts of France. But
the Province of Languedoc exhibits
very curious Specimens.

There are 2 Methods of depriving
Crude Antimony of its Sulphur

1 Slow and gradual Calci-
-nation of the Ore, it affords a
grey Oxide, and this used by

a Violent heat is Converted
into a Reddish and partly trans-
parent Glass of Antimony
is violently Corrosive but
is Capable of being Corrected
by mixing or kneading it with
Yellow Wax and afterwards
Running off the Wax. This is
the Cerated Wax of Purple so
much extolled in Dysentery

2. Antimony may be deprived of its
Sulphur by projecting into an
ignited Crucible a Mixture of
8 parts of Crude Antimony - 6
of Tartar and 3 of ~~Antimony~~
Nitre - By keeping this Mixture
in fusion for a certain time Antimony
is obtained in the Metallic state
Copper, Silver & Iron w^h are used to
Sulphure of Antimony, seize its Sulphur
and reduce it to the state of Regulus.

If 2 parts of the Corros. Muriat:
of Mercury and one of Antimony
be distilled together, a very slight
Degree of heat drives over a Butyrea-
-ous Matter it is called
Butter of Antimony or Sublimed
Muriat. of Antimony. It is used
an Eucharistic - in this Salt is added
to Water a ~~fine~~^{white} powder falls
down, called powder of Elgnoth,
or Mercurius Vitæ.

Wine & the Acetum Acid Dissolve
(Antimony; -

Antimoniatised Tartre of Potash
is decomposed on the fire. by cracking
and leaves a Coaly Residue - 60 parts
of Water dissolve it - it is likewise
decomposed by the Alkali & Lime -
Equal parts of Antimony and white Sugar
into a Crucible & ignited is reduced to the
State of white Acid: this is called diaphoretic
Antimony.

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so many Unit, but a yth part of many and
 not a yth part of many in its
 measure, and so a proportion from yth to yth
 but not in yth measure, and so a proportion
 in Arithmetic.

Addition, subtraction, multiplication, division
 to be may be made in Arithmetic, addition & pro-
 portion to be in some Measure, and so in
 other four

The four the order of proportion of four numbers
 may be proportionate.

- (1) The sum of the two extremes will be equal
 to the sum of the two means.
- (2) The sum of the two extremes will be equal to the
 sum of the two means.
- (3) The sum of the two extremes will be equal to the
 sum of the two means.
- (4) The sum of the two extremes will be equal to the
 sum of the two means.
- (5) The sum of the two extremes will be equal to the
 sum of the two means.

we say 10 is given in direct proportion, and
by multiplication $10 \times 3 = 30$ together a dividend, and
the 10
is given in inverse proportion
by multiplying out $10 \times 3 = 30$ together, and
dividing by 10.

To obtain each of these:

By Addition we find the amount or sum of two
or more numbers collected together.

By Subtraction we find the diff. of two
or more numbers.

By Multiplication we find the amount of
a given number repeated any number of
times. The number multiplied is called
the Multiplicand, the number multiplying
the Multiplicand, or both are called factors, &
the number produced is called the product, or
the result of those factors.

By Division we find how often one number
is contained in another. The number divided
is called the Dividend. That which divides it, the Divisor.

one number produced by the other
is called a coefficient.

The inverse operation of finding a power of a number is called finding a root. A power of a number is called a power of that number when it was produced by that power.

By Evolution we find a root of any given power of by the rule of three or proportion we find a number proportional to three given numbers.

How are the eight powers of roots particularly denominated?

The product of two equal factors is called the square or second power, the product of three equal factors, the cube or third power, that is, four equal factors, the biquadrate or fourth power &c and the roots of these powers are called the square root, the cube root, the biquadrate root, &c.

Give an Example of each of these fundamental operations in numbers.

The sum of 12 and 3 is 15, by addition

The Diff. of 14 and 5 is 9 by subtraction

... 12 by 3 is 4 by division

... 12 by 3 is 4 by division
... 12 by 3 is 4 by division
... 12 by 3 is 4 by division

And it is a ^{1st} proportional to 15, 3 & 10.

And so you understand in ratio is applied
to numbers.

It is the relation of one number to another, & may
be expressed or measured by the Quotient of the 1st
called the Antecedent divided by the 2^d called the
consequent.

When are four numbers said to be directly propor-
tional?

When the 1st has the same ratio to the 2^d that
the 3^d has to the 4th.

Give an Example

$$12:3::16:4$$

When are two numbers said to be inversely as
two other numbers?

When in one pair the Antecedent has the same ratio

is consequent. that in the 1st pair is consequent
and in the 2nd pair is antecedent.

Give an Example.
inversion

$$12 : 3 :: 16 : 4$$

When are two Numbers said to be reciprocally
proportional to two other Numbers?

When one of the Numbers in the 1st pair is to
one of the Numbers in the 2nd pair as the
other Number in the 1st pair is to the remaining
Number in the 2nd pair. Give an Exam.

$$12 \text{ and } 4 \text{ are reciprocally proportional to } 3 \text{ and } 16. \text{ for } 12 : 3 :: 16 : 4.$$

What are the chief properties of four Numbers
directly proportional?

1st The rectangle of the two Extremes will be equal
to the rectangle of the two means.

2^d They will be alternately proportional that
is 1st : 3rd :: 2nd : 4th

3^d They will be inversely proportional
that is 1st : 2nd :: 4th : 3rd

of the same, considered, proportional
as the first term is to the second
as the third term is to the fourth

Now is direct proportion
that is the 1st of 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th
Now is direct proportion joined
multiplying the 1st by 2nd 3rd 4th 5th 6th 7th 8th 9th 10th
the product is the 1st

Now is inverse proportion
By multiplying the 1st by 2nd 3rd 4th 5th 6th 7th 8th 9th 10th
the product is the 1st

What do you understand by a Progression?
It is a Series of Numbers gradually
increasing or decreasing according to some certain
Law.

What is an Arithmetical Progression?
That is a Series of Terms gradually increasing or
decreasing by a common Difference.

Mention the chief properties of an Arith^m Series?

- (1) The Sum of 1st & Extremes equals the Sum
of any two terms equally distant from 1st
Extremes.

When three terms are in arithmetical progression
the sum of the two extremes is equal to the
mean

How would you find the least sum from
the least common Diff. of numbers in arith.
I would multiply the com. Diff. by the number
of terms less one & to the product add the first term
the sum would be the greatest

How would you find the sum of the whole
series.

Multiply the sum of the two extremes
by the number of terms - the product
is the sum of the series.

What is a geometrical series?

that in which the terms gradually increase or decrease
by a common multiplier or divisor

as 1, 2, 4, 8, 16, 32 &c. or 32, 16, 8, 4, 2, 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ &c.

What are the chief properties of a geometrical series?

1) the rectangle of the two extremes is equal to the
rectangle of any two terms equally distant
from the extremes

When three terms are in geometrical progression
the rectangle of the two extremes is equal to the square
of the mean

a unit & the common unit is said
to be the least common denominator - This
is multiplied by the last term & the
result is the sum.

The diff. between the greatest & least terms divi-
do by the ratio of one unit, gives the sum
and the sum is the greatest.

That is a Fraction

One, part or parts of an unit or Integer &

That is meant by the Denom. of Numerator of a frac.

The Denom. of a frac. is the number of parts into
which the Integer is conceived to be divided. & the
Numerator is the Number of those parts in the
sum. — Or a frac. may be considered as the
Quotient arising from Division of the summa-
ry by the Denom.

How many kinds of frac^s are there?

Two; Vulgar or Decimal — That is the best.

On vulgar frac^s The Denom. may be any

number whatsoever & is always set under
the Numerator & a line drawn between them

But in decimal, the Denom. is either 10 or

2. The lower part of the fraction is the denominator and is as many times the numerator as in the numerator.

Now then is a decimal a mixed number? By a decimal is meant a number which is a fraction of a unit.

Three proper fractions are $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$.

Explain & exemplify each, these.

In a proper frac. the Numerator is less than the Denom. as $\frac{1}{2}$.

In an Improper frac. the Numerator is greater than the Denom. as $\frac{4}{3}$.

A Compound frac. is a frac. of a frac. as $\frac{1}{2}$ of $\frac{1}{3}$.

What is a mixed number?

A mixed number is a frac. as $1\frac{3}{4}$.

Now some general principles upon which the Questions in fact may be explained.

1. If both parts of a frac. be employed or divided by the same number the result will be a frac. of the same value tho' in diff. terms. Thus $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$ are all equal to each other.

2. A frac. is multiplied either by multiplying the Numerator or dividing the Denom. by the Multiplier.

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What do you understand by a com. Multiple
of 2 or more given Numbers?

Any Number which they will all, even
divide without a Remainder

How would you find the least com. Multiple
of 2 or More given Numbers?

I would first place them in a straight line
one after another, then divide any 2 or more
of them by any com. measure ^{the} ^{other} numbers
the several Quotients together by ^{the} ^{same} ^{measure}

2^d rank of numerators and the like, so that
no further division can be made. The
of numerators of the same rank, and the like
continually, till they are all
multiple of each other.

Now would you reduce a fraction to its lowest
terms, by dividing both parts of the fraction by the
greatest com. measure of the numerator and
denominator, or any other com. measure, it is so on
till no farther division can be made
the fraction is then in its lowest terms.

Now would you reduce fractions to a common
denominator

1st would multiply, every one each numerator
into all the denominators, but its own for a
numerator of all the denominators for a new deno-
minator, and the least com. multiple of all
the denominators for a com. Denom. Divide
the numerators, every denominator severally
by the com. Denom. The quotient be the given number
or a fraction in new denominators -
it is the best. Between these two Rules for
reducing fractions to a com. Denom.

... the same power. ...
... in Denominator
... times to each other.
... a compound frac. to a
...
...

... all the Numerators together
... Denominator
... new Denom.

... reduce a mix. number to an improper
... multiply the integer part by the Denom. of
... frac. adding in the Numer.
... Numerator of fraction to Denom.
... the fractional part for a Denom.

How would you reduce an improper
to a mixed number

Divide the Numerator by the Denom.
Quotient will be the integer part & Denom.
Remainder & Divisor will be the Numerator of
of the fractional part.

How would you reduce ...
Denomination to a ...
a Shilling?

Multiply the ... by that number

Let $\frac{a}{b}$ be a fraction. The sum of the numerator and denominator is $\frac{a+b}{b}$. The difference of the numerator and denominator is $\frac{a-b}{b}$. The product of the numerator and denominator is $\frac{ab}{b}$. The quotient of the numerator and denominator is $\frac{a}{b}$.

For a fraction, find both parts of the fraction and then find the sum.

For a fraction, find the root of both the numerator and denominator.

Give an Exam. of each of the foregoing rules in numbers.

What is the sum of $\frac{2}{3}$ & $\frac{1}{4}$ is $\frac{17}{12}$ or $1\frac{5}{12}$ by Addition

The Diff. of $\frac{2}{3}$ & $\frac{1}{4}$ is $\frac{1}{12}$ by Subtraction

The Prod. of $\frac{2}{3}$ & $\frac{1}{4}$ is $\frac{2}{12}$ or $\frac{1}{6}$ by Multiplication

The Quotient of $\frac{2}{3}$ & $\frac{1}{4}$ is $\frac{8}{3}$ by Division

The square of $\frac{2}{3}$ is $\frac{4}{9}$ by Squaring

The square root of $\frac{4}{9}$ is $\frac{2}{3}$ by Extraction

The square root of $\frac{1}{4}$ is $\frac{1}{2}$ by Extraction

Of Decimals

How are the com. Arithmetical Operations performed in Decimals?

Exactly as in whole numbers with a few necessary Cautions. Mention these as they occur.

In Addition & Subtraction - that the decimal points that separate the whole numbers from the fractions, both in the given numbers &

in the same position
in the same position Row

2) In Multip. — That the decimal places joined together
as in both the factors.

3) In Division — That the decimal places pointed off in the dividend
as in those in the divisor may be equal to
those in the divisor

4) In Division — That the decimal places in the quotient
places in the quotient as shown in the root
indicated by the index of the Power

5) In Evolution — That the period, or
number the decimal point in the given power.

in any operations there should not be any
error in the result as there ought to be decimal
places, how would you supply the defect?

by prefixing a sufficient number of zeros
that is the effect of removing the decimal point
from the number.

Removing it one place towards the right Multiplies
by 10, two places by 100: — one place towards the
left divides by 10, 2 by 100, & so on —

[Faint handwritten notes at the bottom of the page]

12. *Phlox* *capitata* 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035 1036 1037 1038 1039 1040 1041 1042 1043 1044 104

There were great numbers of
many of the same kind of
fish.

I found the skin of a rufous
bird in the cage. It is a specimen.

How would you find the Excess of a Decimal in
a given part of the Integer?

Multiplying the Decimal by the Number is one
of the given Integer contains of the next lower
denomination, the Decimal part of the Product
by that Number is one of this Denomination
contains of the next lower, & so on, then the
Integral parts of the several products collected
together will be the Value req^d.

Have you any Short Method of showing
the Principles and of Partitions, to the decimal
of a pound?

yes; to the Shillings & more the 2 farthings
in the pence & farthings increased by two

half pastings in the same way I can find
the value of the half pastings. I will
regd. to the places.

Now would you reverse this operation. That is
find the value of the pastings by 3 figures

Figures on the right hand of the first
pasting of the first figure. If they
be divided by 2 & they exceed 3, if
1 & they exceed 4 & so —

Of Logarithms

What do you understand by Logarithms?

They are artificial Numbers so adapted to
natural Numbers, that the sum of the Logarithms
of any two Numbers may be the Logarithm
of any two Numbers the product of
them Numbers.

Now then can you perform the six
Operations in Arithmetic by Logarithms.
Multiplication of Numbers by the Addition

... the ...
... the ...
... the ...

... may the Logarithm
... be computed?

... in arithmetic
... in Geo.
... what
... common ratio the term
... will be
... terms in
the geometrical progression.

From what particular Series was the Table
of common Logarithms computed?

The Arithmetical Series is 0, 1, 2, 3, 4, 5, 6, &c.
the com. Diff. being 1, & the Geometrical Series
is, 1, 10, 100, &c. the com. ratio being 10, & is the
Logarithm of 1 of 10, 2 of 100 &c

How would you find the Logarithms of the in-
mediate Numbers between the terms of the
geometrical Series? To find the Logarithm
of the Number 2.

This might be done by finding such a number
of geometrical Means between 1 & 10 that

in the decimal places of the number
calculated, & then find the
Arithmetical Means of the numbers
Mean proportion to the number L in
the table of Logarithms.
You will find the number L in the
table of Logarithms, & the number
in the table of Logarithms.

No. of the prime number
might be found from the table of Logarithms.

What is meant by the Index of a Logarithm?
It is the whole Number or Integral part, & is
always an Unit less than the Integral places
in the corresponding number.

What then will the Index of the Logarithm
of a fraction be?

It will be a negative Number consisting
of as many units as the place of the first
significant figure of the frac. is from the decimal
point.

How would you find the Logarithm
of a Number exceeding the limits of the table
made use of?

if found to be a proper proportion
of the last to the first, it is the next greater.
The number corresponding to a Logarithm
is called the Antilogarithm.

By finding the Number corresponding to the
Logarithm next less than in the Table, a pro-
portional part of the Diff. is taken if it be

proportional to the Diff. of the Logarithms.

Not strictly, as every number in the Diff.
of the Logarithms is small compared to the
whole Logarithms.

In extracting the root of a frac. by Logarithms
the negative Index of the Logarithms is
not exactly divisible by the Index of the Power
how would you proceed?

I would increase the negative Index by
such Number as would make it divisible
then suppose the same Number prefixed
to the Decimal part of the Logarithm.

Enumerate some of the Uses of Arithmetic in
the common affairs of Life?

Arithmetic is employed in finding the Amount
of any given Number of particulars at a given rate.

Johny Smith, Esq. and 2 - sons.

Cañoneros. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 8

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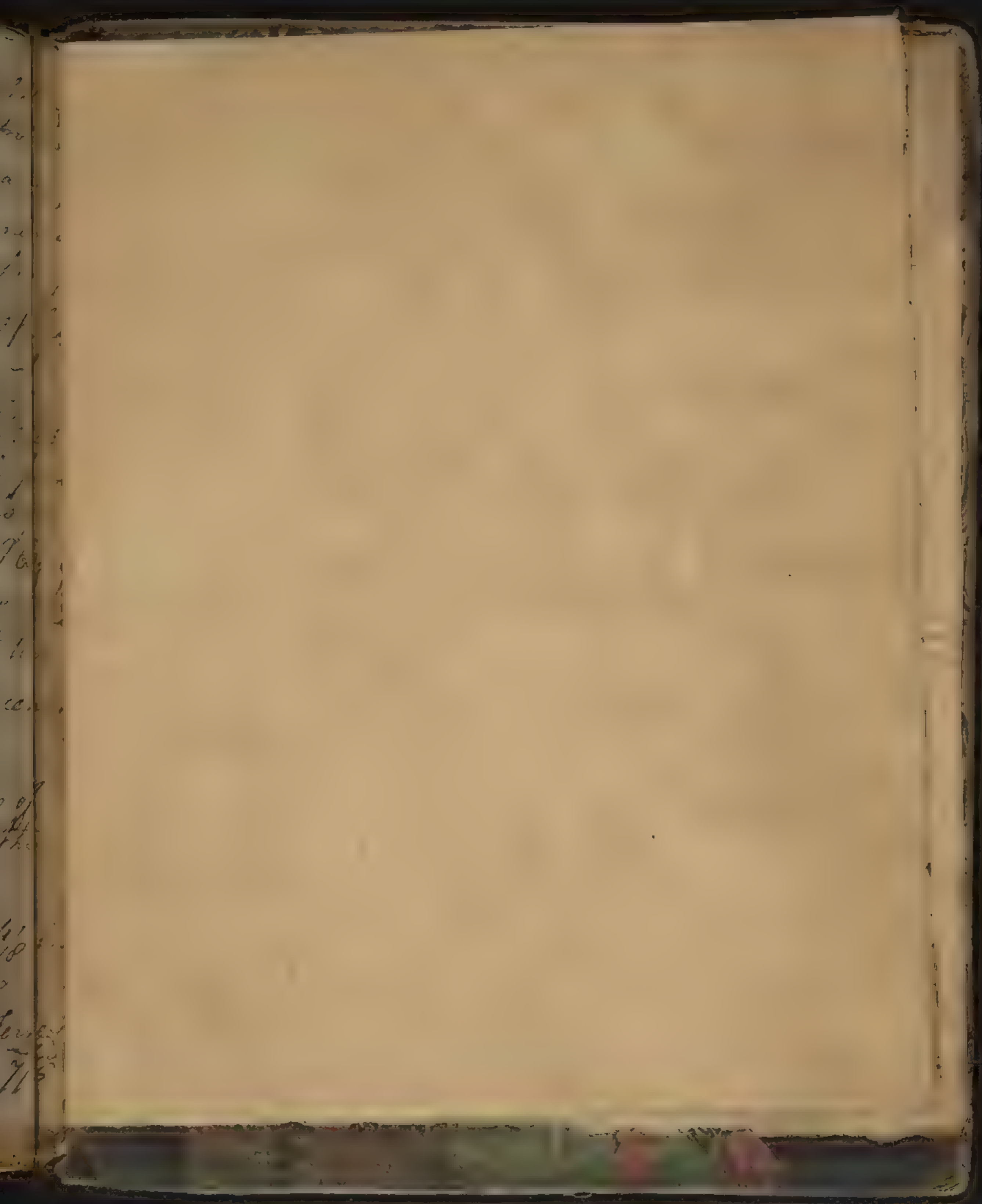
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